

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington Street • Phoenix, AZ 85007 • Phone: (602) 771-2338

GENERAL AIR QUALITY CONTROL PERMIT

for

Hot Mix Asphalt Plants

(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", "F", "G", "H" and "I"

ADEQ GENERAL PERMIT NUMBER 109 PERMIT CLASS II EXPIRATION DATE April 26, 2011

PERMIT ISSUED THIS _____ DAY OF _____, 2008

SIGNATURE

Nancy C. Wrona, Director, Air Quality Division

TITLE

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**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS
TABLE OF CONTENTS**

I.	INTRODUCTION	7
II.	APPLICATION FOR AUTHORIZATION TO OPERATE	7
III.	ATTACHMENT APPLICABILITY	8
	ATTACHMENT "A": GENERAL PROVISIONS	9
I.	GENERAL PERMIT EXPIRATION AND RENEWAL	9
II.	COMPLIANCE WITH PERMIT CONDITIONS	9
III.	GENERAL PERMIT REOPENING, REVOCATION AND REISSUANCE OR TERMINATION FOR CAUSE.....	9
IV.	POSTING OF GENERAL PERMIT	10
V.	FEE PAYMENT	11
VI.	ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE	11
VII.	COMPLIANCE CERTIFICATION	11
VIII.	CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS	12
IX.	INSPECTION AND ENTRY	12
X.	PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARDS	13
XI.	EXCESS EMISSIONS, PERMIT DEVIATION, AND EMERGENCY REPORTING	13
XII.	RECORD KEEPING REQUIREMENTS.....	18
XIII.	REPORTING REQUIREMENTS	18
XIV.	DUTY TO PROVIDE INFORMATION.....	18
XV.	FACILITY CHANGE ALLOWED WITHOUT OBTAINING AN A.T.O. OR INDIVIDUAL PERMITS	19
XVI.	TESTING REQUIREMENTS	21
XVII.	PROPERTY RIGHTS.....	22
XVIII.	SEVERABILITY CLAUSE.....	22
XIX.	PERMIT SHIELD.....	22

XX.	ACCIDENTAL RELEASE PROGRAM.....	23
XXI.	APPLICABILITY OF NSPS GENERAL PROVISIONS	23
	ATTACHMENT "B": FACILITY WIDE REQUIREMENTS	25
I.	RELATIONSHIP TO APPLICABLE STATE IMPLEMENTATION PLAN.....	25
II.	FACILITY WIDE LIMITATIONS	25
III.	FUGITIVE DUST REQUIREMENTS.....	26
IV.	MOBILE SOURCE REQUIREMENTS.....	28
V.	CONDITIONS SPECIFIC TO PORTABLE SOURCES	29
VI.	OTHER PERIODIC ACTIVITY REQUIREMENTS.....	30
	ATTACHMENT "C": HOT MIX ASPHALT PLANT- SPECIFIC CONDITIONS.....	35
I.	HOT MIX PLANT REQUIREMENTS.....	35
	A. General Requirements.....	35
	B. NSPS Requirements.....	41
	C. Non-NSPS Requirements	42
II.	ASPHALT HEATER REQUIREMENTS.....	44
	ATTACHMENT "D": INTERNAL COMBUSTION ENGINE REQUIREMENTS	47
I.	APPLICABILITY	47
II.	OPERATIONAL LIMITATIONS.....	47
III.	COMPRESSION IGNITION ENGINES SUBJECT TO NSPS.....	47
IV.	GENERATORS NOT SUBJECT TO NSPS	60
V.	NON-ROAD ENGINES	62
	ATTACHMENT "E: SPECIFIC CONDITIONS FOR COLLOCATED CRUSHING AND SCREENING PLANTS	64
I.	APPLICABILITY	64
II.	GENERAL REQUIREMENTS	64
III.	NSPS REQUIREMENTS	65
IV.	NON – NSPS REQUIREMENTS	72
	ATTACHMENT "F": SPECIFIC CONDITIONS FOR COLLOCATED CONCRETE BATCH PLANTS.....	76

I.	APPLICABILITY	76
II.	OPERATIONAL LIMITATIONS	76
III.	CONCRETE BATCH PLANT REQUIREMENTS.....	76
ATTACHMENT “G”: ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN MARICOPA COUNTY		78
I.	APPLICABILITY	78
II.	FACILITY-WIDE LIMITATIONS.....	78
III.	HOT MIX ASPHALT PLANT REQUIREMENTS	83
IV.	INTERNAL COMBUSTION ENGINES	85
V.	CRUSHING AND SCREENING PLANT REQUIREMENTS	90
VI.	CONCRETE BATCH PLANT REQUIREMENTS	92
VII.	FUGITIVE DUST REQUIREMENTS	94
ATTACHMENT “H”: ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN PIMA COUNTY		108
I.	APPLICABILITY.....	108
II.	HOT MIX ASPHALT PLANT REQUIREMENTS	108
III.	CRUSHING AND SCREENING PLANT REQUIREMENTS	109
IV.	CONCRETE BATCH PLANT REQUIREMENTS	110
V.	FUGITIVE EMISSIONS REQUIREMENTS	110
VI.	OTHER SPECIFIC REQUIREMENTS	113
ATTACHMENT “I”: ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN PINAL COUNTY		116
I.	APPLICABILITY	116
II.	FACILITY-WIDE REQUIREMENTS.....	116

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AIR QUALITY CONTROL GENERAL PERMIT FOR HOT MIX ASPHALT PLANTS

I. INTRODUCTION

- A. This document is a General Permit for Hot Mix Asphalt Plants, authorized under Arizona Administrative Code (A.A.C.) R18-2-501 thru -511 and Arizona Revised Statutes (A.R.S.) §49-426. Owners/operators of existing and new hot mix asphalt plants may choose to utilize this permit in lieu of an individual permit. Such parties shall do so by obtaining an individual Authorization to Operate (ATO) for each rotary dryer, pug mill, asphalt heater, batch plant, silos, crusher, screen, lime silo, and internal combustion engine (except for those internal combustion engines which are integrated into crushers, screens or conveyors), which will attest to their formal agreement to abide by all conditions contained herein. Other associated pieces of equipment do not require an ATO but are subject to the provisions of this General Permit when associated with crushing or screening activities.
- B. This General Permit covers stationary and portable hot mix asphalt plants and collocated crushing and screening plants and/or collocated concrete batch plants that are subject to state or county regulations.
- C. This General Permit does not apply to sources that require a Class I permit.
- D. References to the “Director” in this General Permit mean the Director of the Air Quality Division of the Arizona Department of Environmental Quality (ADEQ). References to the “Department” mean ADEQ. For sources required to obtain an ATOs from the Maricopa, Pima or Pinal County, references in this document to the “Department” mean the Air Quality Control agency for the respective county and references to the “Director” mean the Control Officer of the respective agency except as otherwise indicated.
- E. This General Permit applies to sources operating in all counties of Arizona.

F. Jurisdiction

The Maricopa, Pima and Pinal County air quality control agencies may administer, inspect, and enforce this General Permit and issue ATOs for sources under their jurisdiction. The agency that issues the ATOs has jurisdiction over these sources and is responsible for enforcing the conditions of this General Permit unless ADEQ asserts jurisdiction over these sources.

II. APPLICATION FOR AUTHORIZATION TO OPERATE

- A. Any source, which is qualified to be covered by this General Permit, may apply to the Department for authority to operate under this General Permit. Applicants shall submit the application forms and necessary information included in Appendix 1 of A.A.C. Title 18, Chapter 2. Applicants may complete additional forms available from the Department. The application must specifically state that coverage under this General Permit is requested.
- B. If the hot mix asphalt plant owner is a rental company, the rental company shall serve as Applicant and apply for coverage under this General Permit. Both the renter and lessee

will be responsible for the operation of the equipment in compliance with the permit conditions.

- C. In order to be granted coverage under this General Permit, applicants must submit and agree to operate in accordance with an acceptable compliance plan.

III. ATTACHMENT APPLICABILITY

- A. Attachments “A”, “B”, “C” are applicable to all facilities covered under this General Permit.
- B. Attachment “D” is applicable if the facility has generators.
- C. Attachment “E” is additionally applicable if the facility has a collocated Crushing & Screening plant.
- D. Attachment “F” is additionally applicable if the facility has a collocated Concrete Batch Plant.
- E. If the facility is located in the Maricopa, Pima or Pinal County, Attachments “G”, “H”, or “I” respectively are applicable in addition to above.

**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

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. All Permittee's Authorizations 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 to all Permittees who have been granted, or who have applications pending for, ATOs 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

- A.** 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 constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action, for ATO 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]
- B.** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General 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 reopen and reissue, or 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]
 - 3. The Director or the Administrator determines that the permit contains a material

mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit. [A.A.C. R18-2-321.A.1.c]

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements. [A.A.C. R18-2-321.A.1.d]

B. The Director shall provide written notice to all sources operating under this General Permit prior to reissuance or termination of this General Permit. Such notice shall include an explanation of the basis for the proposed action. Within 180 days of receipt of the notice of the expiration, termination or cancellation of this General Permit, sources notified shall submit an application to the Director for the appropriate permit. [A.A.C. R18-2-510.B]

C. The Director may require a source authorized to operate under this General Permit to apply for and obtain an individual source permit at any time if: [A.A.C. R18-2-510.C]

1. The source is not in compliance with the terms and conditions of this General Permit;
2. The Director has determined that the emissions from the source or facility class are significant contributors to ambient air quality standard violations, which are not adequately addressed by the requirements in this General Permit.
3. The Director has information, which indicates that the effects on human health and the environment from the sources covered under this General Permit are unacceptable;
4. The Director has reasonable cause to believe that the ATO was obtained by fraud or misrepresentation; or
5. The person applying for an ATO failed to disclose a material fact required by the permit application or the regulations applicable to the ATO of which the applicant had or should have had knowledge at the time the application was submitted.

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]

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.

C. A copy of the complete General Permit and associated ATOs shall be kept on the site.

V. FEE PAYMENT

[A.A.C. R18-2- 511]

The Permittee shall pay fees to the Director pursuant to A.R.S. §49-426(E) and 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. [A.A.C. R18-2-327.B]

VII. COMPLIANCE CERTIFICATION

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

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

- B.** The compliance certification shall include the following:
1. Identification of each term or condition of the permit that is the basis of the certification. [A.A.C. R18-2-309.2.c.i]
 2. Identification of the method or other means used by the Permittee for determining the compliance status with each term and condition during the certification period. [A.A.C. R18-2-309.2.c.ii]
 3. The status of compliance with the terms and conditions of this permit for the period covered by the certification, based on the methods or means designated in Condition VII.B.2 above. The certification shall identify each deviation and take it into account for consideration in the compliance certification. [A.A.C. R18-2-309.2.c.iii]
 4. All instances of deviations from permit requirements reported pursuant to Condition XI.B of this attachment; [A.A.C. R18-2-306.A.5]
 5. Other facts the Director may require determining the compliance status of the source. [A.A.C. R18-2-309.2.c.iv]
- 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 [A.A.C. R18-2-309.3]

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.

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. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD [A.A.C. R18-2-304(C)]

If the sources which have been issued ATOs become subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, reapply for coverage under the General Permit demonstrating how the sources will comply with the standard.

XI. EXCESS EMISSIONS, PERMIT DEVIATION, 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: [R18-2-310.01.A]

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

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

b. The report shall contain the following information:

i. Identity of each stack or other emission point where the excess emissions occurred; [R18-2-310.01.B.1]

ii. Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions; [R18-2-310.01.B.2]

iii. Date, time and duration, or expected duration, of the excess emissions; [R18-2-310.01.B.3]

iv. Identity of the equipment from which the excess emissions emanated; [R18-2-310.01.B.4]

v. Nature and cause of such emissions; [R18-2-310.01.B.5]

vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned

to prevent the recurrence of such malfunctions; and
[R18-2-310.01.B.6]

- vii. Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
[R18-2-310.01.B.7 & 8]

- 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 XI.A.1 above.
[A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting [A.A.C. R18-2-306.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

- 1. An “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[A.A.C. R18-2-306.E.1]
- 2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XI.C.3 below is met.
[A.A.C. R18-2-306.E.2]
- 3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
[A.A.C. R18-2-306.E.3]
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - 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. [A.A.C. R18-2-306.E.4]
 - 5. This provision is in addition to any emergency or upset provision contained in any applicable requirement. [A.A.C. R18-2-306.E.5]

D. Compliance Schedule [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

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

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

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than

a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of Condition XI.A and has demonstrated all of the following: [A.A.C. R18-2-310.B]

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

3. Affirmative Defense for Startup and Shutdown.

- a. Except as provided in Condition XI.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an

affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of Condition XI.A and has demonstrated all of the following:

[A.A.C. R18-2-310.C.1]

- i. The excess emissions could not have been prevented through careful and prudent planning and design;
 - ii. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
 - iii. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
 - v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - vi. During the period of excess emissions there were no exceedance of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
 - vii. All emissions monitoring systems were kept in operation if at all practicable; and
 - viii. Contemporaneous records documented the Permittee's actions in response to the excess emissions.
- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XI.E.2 above. [A.A.C. R18-2-310.C.2]

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

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

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XI.E.2 or XI.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Conditions XI.E and XI.A, that all reasonable and practicable measures within

the Permittee's control were implemented to prevent the occurrence of the excess emissions. [A.A.C. R18-2-310.E]

XII. RECORD KEEPING REQUIREMENTS

A. Monitoring Records [A.A.C. R18-2-306.A.4.a]

The Permittee shall keep records of all required monitoring information including, but not limited to, the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The name of the company or entity that performed the analyses;
4. A description of the analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions 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 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.

XIII. REPORTING REQUIREMENTS [A.A.C. R18-2-306.A.5]

The Permittee shall submit the following reports:

- A.** Compliance certifications in accordance with Section VII of Attachment "A".
- B.** Excess emissions, permit deviations, and emergency reports in accordance with Section XI of Attachment "A".
- C.** Performance test results in accordance with Condition XVI.G of Attachment "A".
- D.** Reports required by any condition in other Attachments.

XIV. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for 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.G]

XV. FACILITY CHANGE ALLOWED WITHOUT OBTAINING AN ATO OR INDIVIDUAL PERMIT [A.A.C. R18-2-317.02]

- A.** Except for a physical change or change in the method of operation at a Class II source subject to logging or notice requirements in Conditions XV.B and XV.C below, a change at a Class II source shall not be subject to revision, notice, or logging requirements under this Section. [A.A.C. R18-2-317.02.A]

- B.** The following changes may be made if the source keeps on site records of the changes according to Appendix 3 of the Arizona Administrative Code: [A.A.C. R18-2-317.02. B]

1. Implementing an alternative operating scenario, including raw material changes;
2. Changing process equipment (as long as the change does not require a new ATO), operating procedures, or making any other physical change if the permit requires the change to be logged;
3. Engaging in any new insignificant activity listed in A.A.C. R18-2-101.57.a through A.A.C. R18-2-101.57.i but not listed in the permit;
4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Director may require verification of efficiency of the new equipment by performance tests; and
5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.

- C.** The following changes may be made if the source provides written notice to the Department in advance of the change as provided below:

1. If allowed under the General Permit, replacing an item of air pollution control equipment listed in the permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: 7 days. The Director may require verification of efficiency of the new equipment by performance tests; [A.A.C. R18-2-317.02. C.1]
2. If allowed under the General Permit, replacing an item of air pollution control equipment listed in the permit with one that is not substantially similar but that

has the same or better efficiency: 30 days. The Director may require verification of efficiency of the new equipment by performance tests; and

[A.A.C. R18-2-317.02.C.3]

3. A change that would trigger an applicable requirement that already exists in the permit: 30 days unless otherwise required by the applicable requirement.

[A.A.C. R18-2-317.02.C.4]

- D.** For each change under Condition XV.C above, the written notice shall be by certified mail or hand delivery and shall be received by the Director the minimum amount of time in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided with less than required notice, but must be provided as far in advance of the change, or if advance notification is not practicable, as soon after the change as possible. The written notice shall include:

[A.A.C. R18-2-317.02. D]

1. When the proposed change will occur,
2. A description of the change,
3. Any change in emissions of regulated air pollutants, and
4. Any permit term or condition that is no longer applicable as a result of the change.

- E.** The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate operating scenario under Condition XV.B.1.

[A.A.C. R18-2-317.02.F]

- F.** If a source change is described under both Conditions XV.B and XV.C above, the source shall comply with Condition XV.C above.

[A.A.C. R18-2-317.02.H]

- G.** A copy of all logs required under Condition XV.B shall be filed with the Director within 30 days after each anniversary of the permit issuance date. If no changes were made at the source requiring logging, a statement to that effect shall be filed instead.

[A.A.C. R18-2-317.02.I]

- H.** Logging Requirements [A.A.C. R18-2-317.02.B and Appendix 3]

1. Each log entry required by a change under Condition XV.B shall include the following information:

- a. A description of the change, including:

- i. A description of any process change;

- ii. A description of any equipment change, which does not require a new or revised ATOs, including both old and new equipment descriptions, model numbers and serial numbers, or any other unique equipment number; and

- iii. A description of any process material change.
 - b. The date and time that the change occurred,
 - c. The date the entry was made and the first and last name of the person making the entry.
- 2. Logs shall be kept for 5 years from the date created. Logging shall be performed in indelible ink in a bound logbook with sequentially numbered pages, or in any other form, including electronic format, approved by the Director.

XVI. 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 Performance 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 the test result.

- 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 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.

XVII. PROPERTY RIGHTS

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

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

XVIII. SEVERABILITY CLAUSE

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

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.

XIX. PERMIT SHIELD

[A.A.C. R18-2-325 and -508]

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 XV of this Attachment.

XX. ACCIDENTAL RELEASE PROGRAM

[40 CFR 68]

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

XXI. APPLICABILITY OF NSPS GENERAL PROVISIONS

[40 CFR 60]

For all equipment subject to a New Source Performance Standard, the Permittee shall comply with all applicable requirements contained in Subpart A of Title 40, Chapter 60 of the Code of Federal Regulations.

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**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

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. FACILITY WIDE LIMITATIONS

A. Operational Limitations

1. Within 90 days of permit issuance, the Permittee shall have on site or on call a person certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3.c]
2. *The Permittee shall not operate the equipment identified in the ATOs for more than the number of hours allowed in the ATO.*
[A.A.C. R18-2-306.A.2, -306.01.A and -331.A.3.a]
[Material permit conditions are indicated by underline and italics]
3. The Permittee shall not cause, allow, or permit to be emitted gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

B. Record Keeping Requirements

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

1. The Permittee shall maintain records of the operating hours of the equipment covered under this General Permit. These records shall include the date, equipment identification or equipment type, the starting time (in hours and minutes), the stopping time (in hours and minutes), and the type of fuel burned in each equipment.
2. The Permittee, while operating in Maricopa County, shall maintain a record of daily operating hours for the equipment having ATOs under this General Permit.
3. If the ATOs contain an annual restriction on operating hours, the Permittee shall maintain a record of rolling twelve (12) month total of the operating hours for the equipment having ATOs under this General Permit.

C. Maintenance Requirement

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

The Permittee shall operate and maintain all equipment associated with this General Permit in accordance with manufacturer's specifications. If vendor specifications are not available, the Permittee shall develop and implement procedures for the proper operation and maintenance of each equipment. A copy of the vendor 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.

D. Testing Requirements

1. If any equipment has emission limits specified for any criteria pollutants in the ATO, the Permittee shall schedule performance tests on each such equipment within 180 days of issuance of the ATOs under this General Permit to demonstrate compliance with the specified emission limit. Subsequent test shall be conducted once every year. [A.A.C. R18-2-312.A and -306.A.3.c]
2. The following test methods shall be used for various criteria pollutants to demonstrate compliance with emission limits: [A.A.C. R18-2-312.B]

Pollutant	Test Method
Nitrogen oxide (NO _x)	EPA Reference Method 7
Carbon monoxide (CO)	EPA Reference Method 10
Volatile organic compound (VOC)	EPA Reference Method 25
Sulfur dioxide (SO ₂)	EPA Reference Method 6
Particulate Matter (PM)	EPA Reference Method 5

III. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to any source of air contaminants which, due to lack of an identifiable emissions point or plume, cannot be considered a point source.

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 source shall not be greater than 40 percent measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-612]
 - b. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - i. 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]
- ii. 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]
- iii. 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]
- iv. 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]
- v. 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]
- vi. 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]
- vii. 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]
- viii. Any other method as proposed by the Permittee and approved by the Director. [A.A.C. R18-2-306.A.3.c]

2. Monitoring and Recordkeeping Requirements

- a. The Permittee shall maintain records of the dates on which any of the activities listed in Conditions III.B.1.b.i through III.B.1.b.viii above were performed and the control measures that were adopted. [A.A.C. R18-2-306.A.3.c]
- b. Opacity Monitoring Requirements [A.A.C. R18-2-306.A.3.c]
 - i. A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the fugitive dust source. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the

emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.B.1.a, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".

- ii. The Permittee shall conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the fugitive dust source. The Permittee shall keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.B.1.a, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".

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

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

IV. MOBILE SOURCE REQUIREMENTS

A. Applicability

The requirements of this Section are applicable to mobile sources that 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. R18-2-101.89. [A.A.C.R18-2-801.A]

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Off-Road Machinery

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any off-road machinery, smoke for any period greater than ten consecutive seconds, the opacity of which exceeds 40 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. Off-road machinery shall include trucks, graders, scrapers, rollers, and other construction and mining machinery not normally driven on a completed public roadway. [A.A.C.R18-2-802.A and A.A.C.R18-2-802.B]

b. Roadway and Site Cleaning Machinery

- i. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40 percent. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [A.A.C.R18-2-804.A]
 - ii. The Permittee shall take reasonable precautions, such as the use of dust suppressants, before the cleaning of a site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means. [A.A.C. R18-2-804.B]
- c. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40 percent. [A.A.C.R18-2-801.B]

2. Recordkeeping Requirement

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.

C. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C. R18-2-801.A, A.A.C. R18-2-801.B, A.A.C. R18-2-802.B, A.A.C. R18-2-804.A and A.A.C. R18-2-804.B. [A.A.C. R18-2-325]

V. CONDITIONS SPECIFIC TO PORTABLE SOURCES

A. Move Notice

[A.A.C. R18-2-324.D and A.A.C. R18-2-306.A.5]

A portable source may be transferred from one location to another provided that the Permittee of such equipment notifies the Director, and/or any control officer who has jurisdiction over the geographic area that includes the new location, of the transfer of the transfer by certified mail at least ten (10) working days before the transfer. The location change shall include the following:

1. A description of **all** permitted equipment (under the same owner or operator) which is going to be present at the site including the permit number, the manufacturer, the model number, the serial number, and equipment ID number(s) for such equipment;
2. The address and description of the present location of the equipment;
3. The address and description of the location to which the equipment is to be transferred, including the availability of all utilities, such as water and electricity, necessary for the proper operation of all control equipment;

4. The date on which equipment is to be moved;
5. The date on which operation of the equipment will begin at the new location; and
6. A statement describing whether or not the Permittee will be moving equipment and operating within one of the following PM₁₀ non-attainment areas: Bullhead City, Douglas/Paul Spur, Hayden, Nogales, Payson, Rillito, or Yuma.

B. Renting or Leasing Permitted Equipment [A.A.C. R18-2-324.C]

In the case that equipment covered under this permit is rented or leased, this permit shall be provided by the owner to the renter or lessee, and the renter or lessee shall be bound by this permit's provisions. In the event a copy of the permit is not provided to the renter or lessee, both the owner and the renter or lessee shall be responsible for the operation of this equipment in compliance with the permit conditions and any violations thereof.

C. Portable Sources Operating Solely in One County [A.A.C. R18-2-324.A and -324.B]

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 until it receives a permit from the Arizona Department of Environmental Quality.

VI. OTHER PERIODIC ACTIVITY REQUIREMENTS

A. Abrasive Blasting

Particulate Matter and Opacity

1. Emission Limitations/Standards

- a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:
 - i. wet blasting;
 - ii. effective enclosures with necessary dust collecting equipment; or
 - iii. any other method approved by the Director.

[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 percent opacity, as measured by EPA Reference Method 9, while operating in a nonattainment or maintenance area.

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

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

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

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

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

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

B. Use of Paints

1. Volatile Organic Compounds

- a. Emission Limitations/Standards

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

- i. The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray. [A.A.C.R18-2-727.A]

- ii. The Permittee or their designated contractor shall not either:

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

- (b) Thin or dilute any architectural coating with a photochemically reactive solvent. [A.A.C.R18-2-727.B]

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

- (a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.
- (b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
- (c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

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

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

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

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

[SIP Provision R9-3-527.C]

b. Monitoring and Recordkeeping Requirements

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

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

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

[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 and SIP Provision R9-3-527.C.

[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 to exceed 20 percent opacity as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

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

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

C. Demolition/Renovation

Hazardous Air Pollutants

1. Emission Limitation/Standard

The Permittee shall comply with all of the requirements of 40 CFR 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos). [A.A.C. R18-2-1101.A.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 [A.A.C. R18-2-325]

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

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**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANT**

**ATTACHMENT "C"
SPECIFIC CONDITIONS – HOT MIX FACILITY**

I. HOT MIX PLANT

A. GENERAL REQUIREMENTS

1. Operational Limitations [A.A.C. R18-2-306.A.2]

a. The Permittee shall not exceed the maximum capacity for the drum dryer identified in the ATO.

b. Drum Dryer Stack Requirements

i. The drum dryer stack height above ground shall be 22 feet or greater.

ii. Any stack located within 5L of a building (either on-site or off-site) must be $\geq 1.5H$, or the stack must be located more than 5L away from any building (either on-site or off-site).

Where:

L = the lesser of the building height or width

H = the building height

c. Smoke Point Requirements [A.A.C. R18-2-306.A.3.c]

i. The Permittee shall have, on site, a certificate stating the asphaltic concrete smoke point for the material being processed.

ii. The Permittee shall not operate the dryer burner in such a way that the temperature of the hot aggregate mixture is equal to or greater than the smoke point of the material being processed.

d. Fuel Limitations

i. Permitted Fuels [A.A.C. R18-2-306.A.2]

(a) The Permittee shall only burn the fuels allowed by the ATO in the drum dryer.

If the Permittee is authorized to burn "on specification" used oil fuel in the ATO, it shall be used **only** under the following conditions:

(1) The used oil fuel must be analyzed and certified by the marketer (oil supplier) to be "on

specification" according to the definition in A.R.S.§49-801;

- (2) The flash point shall be at least 100°F; and
- (3) The contaminants must not exceed the following levels (in parts per million by weight):

Arsenic	5 ppm
Cadmium	2 ppm
Chromium	10 ppm
Lead	100 ppm
PCBs	2 ppm

(b) The Permittee shall not co-fire fuels in the drum dryer.

ii. Record Keeping Requirements [A.A.C. R18-2-306.A.3.c]

(a) Fuel Oil

The Permittee, if authorized to burn fuel oil, shall maintain records of fuel supplier certifications.

(b) "On Specification" Used Oil

The Permittee, if authorized to burn "on specification" used oil, shall maintain, on site, copies of the fuel analysis supplied by the marketer for each batch of "on specification" used oil fuel, and shall be responsible for ensuring that the results of the analyses confirm that the contaminant levels specified in Condition I.A.1.d.i.a.(iii) above are not exceeded.

iii. Testing Requirements [A.A.C. R18-2-306.A.3, -312.A, and -312.B]

The Permittee shall burn "on specification" used oil fuel in the dryer burner during all performance tests if "on specification" fuel oil is an approved fuel in the ATO. If the ATO does not authorize the use of "on specification" used oil fuel, then the Permittee shall propose, for the Director's approval, the fuel to be burnt in the dryer burner during the performance test.

e. Recycled Asphalt Requirements

i. Process Restriction [A.A.C. R18-2-306.01]

When using recycled asphalt in the production of hot mix asphalt, the percentage of recycled asphalt used as a portion of the aggregate shall not exceed 50 percent or the percentage used during performance test, whichever is less.

- ii. Testing Requirement [A.A.C. R18-2-312]

Should the Permittee desire to use recycled asphalt as a portion of the aggregate, the Permittee shall conduct a particulate matter emissions performance test using the desired percentage of recycled asphalt as a portion of the aggregate.

- iii. Record Keeping Requirements [A.A.C. R18-2-306.A.3.c and -306.A.4]
 - (a) The Permittee shall maintain records of the percentage of recycled asphalt used during each performance test.
 - (b) The Permittee shall maintain records of the production rate of hot mix asphalt and the percentage of recycled asphalt in the aggregate when using recycled asphalt as a portion of the aggregate in the production of hot mix asphalt.
 - (c) The Permittee shall maintain records of the temperature of the hot aggregate mixture to demonstrate compliance with the Condition I.A.1.c.ii above.

2. Particulate Matter & Opacity

- a. Air Pollution Control Requirements
[A.A.C. R18-2-306.A.2 and A.A.C. R18-2-331.A.3.d and e]
[Material permit conditions are indicated by underline and italics]

- i. Drum Dryer Baghouse/Venturi Scrubber

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, install maintain and operate a venturi scrubber or a baghouse on the drum dryer in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.

- ii. Cement Silo Baghouse/Dust Collector

- (a) *At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, install, maintain and operate the baghouse/dust collector on the cement silo in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.*
- (b) *Loading of cement/fly ash storage silos shall be conducted in such a manner that the displaced air does not by-pass the baghouse/dust collector and is not directly vented to the atmosphere.*

iii. Spray Bars

The Permittee shall install, maintain and operate spray bars, including periods of startup, shutdown, and malfunction, to control visible emissions from screening, handling, transporting or conveying of materials, or other operations likely to result in significant amounts of airborne dust, or the material shall be adequately wet to minimize visible emissions to the extent practicable.

b. Monitoring, Record Keeping and Reporting Requirements

[Material permit conditions are indicated by underline and italics]

i. Drum Dryer Stack

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

- (a) Beginning from the time of issuance of the ATOs under this General Permit, a certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the drum dryer stack. If the opacity of the emissions observed appears to exceed the opacity limit contained in Condition I.B.2.a.ii./ Condition I.C.2.b, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".
- (b) The Permittee shall conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the drum dryer stack. The Permittee shall keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition I.B.2.a.ii./ Condition I.C.2.b, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".
- (c) The Permittee shall maintain logs of all maintenance activities performed on the baghouse. These logs shall be maintained on-site and shall be readily available to ADEQ representatives upon request.

ii. Venturi Scrubber

- (a) The Permittee shall install, calibrate, maintain and operate a monitoring device for the continuous measurement of the pressure differential of the gas stream through the scrubber. The monitoring device shall be certified to be accurate within ± 250 pascals (± 1 inch water) gauge pressure by its manufacturer and shall be calibrated annually in accordance with the manufacturer's specifications.

[A.A.C. R18-2-331.A.3.c, A.A.C. R18-2-306.01]

- (b) The Permittee shall install, calibrate, maintain and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device shall be certified by the manufacturer to be accurate within ± 5 percent of the design scrubbing liquid flow rate and must be calibrated annually in accordance with the manufacturer's specifications.

[A.A.C. R18-2-331.A.3.c, A.A.C. R18-2-306.01]

- (c) After each performance test required under Condition I.A.2.c.i.(a) of this Attachment, the Permittee shall operate the venturi scrubber in such a manner that the pressure differential of the gas stream and the liquid flow rate through the venturi scrubber do not differ by more than ± 30 percent of the average obtained during the most recent performance test.

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

- (d) Should the pressure differential of the gas stream or the liquid flow rate through the venturi scrubber differ by more than ± 30 percent of the averages obtained in the most recent performance test, the Permittee shall repair the controls and equipment in such a manner that the pressure differential of the gas stream and the liquid flow rate through the venturi scrubber differ by less than ± 30 percent of the average obtained in the most recent performance test. The Permittee shall then record the name of the observer, date, and time of the deviation and repairs performed.

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

iii. Drum Dryer Baghouse

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

Within 180 days of the most recent performance test required under Condition I.A.2.c.i.(a) of this Attachment, the Permittee shall conduct a black light inspection on the bags contained in the drum dryer baghouse in an effort to detect broken or leaking bags. If broken or leaking bags are detected, the Permittee shall repair or replace the bags. Upon completion of the inspection, the Permittee shall record the name of the inspector, the date, the

time, and the results of the inspection and repairs. This test shall be conducted annually thereafter.

iv. Cement Silo Baghouse/Dust Collector [A.A.C. R18-2-306.A.3.c]

(a) Beginning from the time of issuance of the ATOs under this General Permit, a certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the cement silo baghouse/dust collector. If the opacity of the emissions observed appears to exceed the opacity limit contained in Condition I.B.2.a.ii./ Condition I.C.2.b, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".

(b) The Permittee shall conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the cement silo baghouse/dust collector. The Permittee shall keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition I.B.2.a.ii./ Condition I.C.2.b, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".

(c) The Permittee shall maintain logs of all maintenance activities performed on the baghouse. These logs shall be maintained on-site and shall be readily available to ADEQ representatives upon request.

c. Testing Requirements

i. Performance Test Requirements

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

(a) Except as identified in Condition I.B.2.b.i of this Attachment, the Permittee shall schedule performance tests for particulate matter and opacity on the drum dryer stack within 180 days of the issuance of the ATO.

- (b) The Permittee shall conduct subsequent performance tests on annual basis.
- ii. Testing Methods [A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-312.B]

Performance tests shall be conducted and data reduced in accordance with EPA Reference Method 5 and Method 9, the procedures contained in the Arizona Testing Manual, 40 CFR Part 60, Appendix A, and Section XVI of Attachment A.
- iii. Record Keeping and Reporting Requirements [A.A.C. R18-2-306.A.3.c and A.A.C. R18-2-306.A.4]

Venturi Scrubber

- (a) During each performance test on the scrubber stack, the Permittee shall record the average gas stream pressure differential across the venturi scrubber, as well as the scrubbing liquid flow rate through the scrubber.
- (b) After the initial performance test on the scrubber stack, the Permittee shall submit to the Director semi-annual reports of occurrences when the scrubber pressure loss (or gain) or liquid flow rate differ by more than 30 percent from the average obtained during the most recent performance test.
- (c) The Permittee shall interpret data and report the final results of each performance test in accordance with Conditions XVI.F and XVI.G of Attachment "A".

B. NEW SOURCE PERFORMANCE STANDARD (NSPS) REQUIREMENTS

- 1. Applicability [40 CFR 60.90]

An NSPS affected facility is defined as any combination of the following which was constructed after June 11, 1973:

- a. Dryers;
- b. Systems for Screening, Handling, Storing, and Weighing Hot Aggregates;
- c. Systems for Loading, Transferring, and Storing Mineral Filler;
- d. Systems for Mixing Hot Mix Asphalt; and
- e. Loading, Transfer, and Storage Systems Associated with Emission Control Systems.

2. Particulate Matter (PM) Emissions
 - a. Emissions Limitations & Standards [A.A.C. R18-2-331.A.3.f and 40 CFR 60.92]
[Material permit conditions are indicated by underline and italics]
 - i. The Permittee shall not cause or allow to be discharged into the atmosphere particulate matter in excess of 0.04 grains per dry standard cubic foot.
 - ii. The Permittee shall not cause or allow to be discharged into the atmosphere any plume which exhibits opacity greater than 20 percent.
 - b. Performance Test Requirements [40 CFR 60.11]
 - i. The Permittee shall conduct performance tests for particulate matter and opacity on the drum dryer stack within 180 days of the issuance of the ATOs if the equipment has not been previously permitted in the State of Arizona.
 - ii. The Permittee shall conduct subsequent performance tests on annual basis.
3. The Permittee shall provide to the Department written notification as follows:
 - a. A notification of the date construction of a NSPS affected facility was commenced postmarked no later than 30 days from such date; [40 CFR 60.7(a)(1)]
 - b. A notification of the actual date of initial startup of a NSPS affected facility postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]
4. Permit Shield [A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with 40 CFR 60.11, 40 CFR 60.7(a)(1), 40 CFR 60.7(a)(3), 40 CFR 60.90 and 40 CFR 60.92.

C. NON-NSPS REQUIREMENTS

1. **Applicability** [A.A.C. R18-2-708, 40 CFR 60.90]

A non-NSPS affected facility is defined as any combination of the following, which was constructed before June 11, 1973:

 - a. Dryers;
 - b. Systems for Screening, Handling, Storing, and Weighing Hot Aggregates;
 - c. Systems for Loading, Transferring, and Storing Mineral Filler;

- d. Systems for Mixing Hot Mix Asphalt; and
- e. Loading, Transfer, and Storage Systems Associated with Emission Control Systems.

2. Particulate Matter (PM)

a. Emissions Limitations & Standards

i. The Permittee shall not cause the discharge of particulate matter into the atmosphere, in any one hour, in total quantities in excess of the amounts calculated by one of the following equations:

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

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

Where:

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

P = the process weight rate in tons-mass per hour
[A.A.C. R18-2-708.B.1]

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

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

Where:

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

P = the process weight rate in tons-mass per hour
[A.A.C. R18-2-708.B.2]

ii. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable particulate matter emissions. [A.A.C. R18-2-708.D]

b. Opacity

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

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

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-702.B, A.A.C. R18-708.B and A.A.C. R18-708.D.

II. ASPHALT HEATER REQUIREMENTS

A. Applicability

This section is applicable to all permitted asphalt heaters.

B. Operating Limitations

1. Asphalt Heater Stack Requirements [A.A.C. R18 2 306.A.2 and 306.01]

a. The asphalt heater(s) stack height above ground shall be 14 feet or greater.

b. Any stack located within 5L of a building (either on-site or off-site) must be $\geq 1.5H$, or the stack must be located more than 5L away from any building (either on-site or off-site).

Where:

L = the lesser of the building height or width

H = the building height

2. Fuel Limitations [A.A.C. R18-2-306.A.2 and -724.G]

The Permittee shall only fire natural gas, LPG or low sulfur fuel oil (less than 0.9% by weight) in the asphalt heaters, as specified in the ATO.

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

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.G.

C. Particulate Matter and Opacity

1. Emissions Limitations and Standards [A.A.C. R18-2-724.C.1]

a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel in Asphalt Heater into the atmosphere in excess of the amounts calculated by the following equation:

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

Where:

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

Q = the heat input in million Btu per hour

- b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter, which may be emitted. [A.A.C. R18-2-724.B]
- c. The Permittee shall not cause, allow or permit the opacity of any plume or effluent from Asphalt Heater(s) to exceed 15 percent. [A.A.C. R18-2-724.J]

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

- a. The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the PM limit specified above. The certification shall contain information regarding the name of fuel supplier and heating value of the fuel. These records shall be made available to ADEQ upon request.
- b. Beginning from the time of issuance of ATOs under this General Permit, A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the stack of the asphalt heater. If the opacity of the emissions observed appears to exceed the opacity limit contained in Condition III.C.1.c, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.C.1.c, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".
- c. The Permittee shall conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the concrete batch plant. The Permittee shall keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.C.1.c, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".

d. The Permittee shall maintain logs of all maintenance activities performed on the baghouse. These logs shall be maintained on-site and shall be readily available to ADEQ representatives upon request.

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

e. The Permittee shall report all 6-minute periods during which the visible emissions exceed 15 percent opacity, as required under Section XI of Attachment "A".

[A.A.C. R18-2-724.J]

3. Permit Shield

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

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.B, A.A.C R18-2-724.C.1, and A.A.C R18-2-724.J.

D. Sulfur Dioxide

1. Emission Limitations and Standards

[A.A.C. R18-2-724.E]

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

2. Monitoring, Recordkeeping, and Reporting

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

The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the sulfur content limit. The certification shall contain the sulfur content of the fuel and the method used to determine the sulfur content of the fuel.

3. Permit Shield

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

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.E.

**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

**ATTACHMENT "D"
INTERNAL COMBUSTION ENGINES REQUIREMENTS**

I. APPLICABILITY

The Section is applicable to all permitted internal combustion engines (except any engines determined by ADEQ as non-road engines).

II. OPERATIONAL LIMITATIONS

A. Stack Requirements [A.A.C. R18 2 306.A.2,-306.01 and - 331]

1. The height of stacks of all internal combustion engines shall be 12 feet or greater above the ground level.
2. Any stack located within 5L of a building (either on-site or off-site) must be 1.5H, or the stack must be located more than 5L away from any building (either on-site or off-site).

Where:

L = the lesser of the building height or width

H = the building height

B. Fuel Limitations

1. The Permittee shall only fire low sulfur fuel oil (less than 0.9 percent by weight of sulfur), natural gas or LPG in the internal combustion engines.
[A.A.C. R18-2-719.H, A.A.C. R18-2-306.01 and - 306.A.2]
2. The Permittee shall keep daily records of the sulfur content and lower heating value of the fuel being fired in the generator(s). The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the sulfur content limit. The certification shall contain the sulfur content of the fuel and the method used to determine the sulfur content of the fuel. These records shall be made available to ADEQ upon request.

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

C. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.H.

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

III. COMPRESSION IGNITION ENGINES SUBJECT TO NSPS

A. Applicability

This Section applies to compression ignition engines marked as subject to NSPS on the associated ATO.

B. General Requirements

1. Operating Requirements

- a. The Permittee shall operate and maintain the engine according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. A copy of the instructions or procedures shall be kept onsite and made available to ADEQ upon request. [40 CFR 60.4211(a) and A.A.C. R18-2-306.A.3]
- b. The Permittee shall only change those engine settings that are permitted by the manufacturer. [40 CFR 60.4211(a)]
- c. The Permittee shall meet the requirements of 40 CFR parts 89, 94, or 1068, as they apply. [40 CFR 60.4211(a)]
- d. The Permittee shall operate and maintain the internal combustion engine according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer over the entire life of the engine. [40 CFR 60.4206]

e. Fuel Requirements

- i. After October 1, 2007, an engine that uses diesel fuel, shall use diesel fuel that meets the following requirements of 40 CFR 80.510(a):
 - (a). Sulfur content: 500 parts per million (ppm) maximum; and
 - (b). A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(a)]
- ii. After October 1, 2010, an engine that uses diesel fuel and has a displacement of less than 30 liters per cylinder, shall use diesel fuel that meets the following requirements of 40 CFR 80.510(b):
 - (a). Sulfur content: 15 ppm maximum; and
 - (b). A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(b)]

f. Additional Emergency Engine Requirements

[40 CFR 60.4211(e), 60.4209(a), A.A.C. R18-2-306.A.3.c, -306.A.4, and -331.A.3.c]
[Material permit conditions are indicated by underline and italics]

- i. The Permittee shall install a non-resettable hour meter prior to startup of the engine.
- ii. Emergency internal combustion engines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine.
- iii. The Permittee shall not operate the emergency engine for the purposes of maintenance checks and readiness testing for more than 100 hours per year unless the Permittee maintains records identifying the Federal, State, or local standards that require maintenance and testing of emergency internal combustion engines beyond 100 hours per year. Copies of such records shall be provided to ADEQ upon request.
- iv. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per year.
- v. The Permittee shall not operate emergency engines except for emergency purposes, and maintenance and testing. There is no time limit on the use of the engine in emergency situations.
- vi. 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.

2. Emission Limitations and Standards

a. Non-emergency Engines

2007 model year and later non-emergency internal combustion engines with a displacement of less than 30 liters per cylinder shall comply with the appropriate emission limitation as follows:

[40 CFR 60.4204(b)]

- i. 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 for new nonroad 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)]

- ii. 2007 through 2010 model year engines with a maximum engine power greater than 3,000 horsepower and a displacement of less than 10 liters per cylinder shall meet the emission standards in Conditions III.C.1.a, III.D.1.a, III.E.1.a, and III.F.1, for all pollutants, for the same maximum engine power.

[40 CFR 60.4201(b)]

- iii. 2011 model year and later engines with a maximum engine power greater than 3,000 horsepower and a displacement of less than 10 liters per cylinder shall meet the emission standards for new nonroad engines in 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 maximum engine power.

[40 CFR 60.4201(c)]

- iv. 2007 model year and later engines with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder shall meet the emissions standards in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

[40 CFR 60.4201(d)]

b. Emergency Engines

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)]

- i. 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)]

- (a). For engines with a maximum engine power less than 50 horsepower:

- (i). 2007 model year engines shall meet the emission standards for new nonroad 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

- (ii). 2008 model year and later engines shall meet the emission standards for new nonroad 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.

[40 CFR 60.4202(a)(1)]

(b). 2007 model year and later engines, with a maximum engine power greater than or equal to 50 horsepower, shall meet the emission standards for new nonroad 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)]

ii. 2007 model year and later engines with a maximum engine power greater than 3,000 horsepower and a displacement of less than 10 liters per cylinder shall meet the emission standards specified below:

(a). 2007 through 2010 model year engines shall meet the emission standards in Conditions III.C.1.a, III.D.1.a, III.E.1.a, and III.F.1, for all pollutants, for the same maximum engine power.

(b). 2011 model year and later engines shall meet the emission standards for new nonroad 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(b)]

iii. 2007 model year and later engines with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder 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(c)]

3. Notification and Reporting Requirements [40 CFR 60.4214(a) and 60.7(a)(1)]

Non-emergency Engines

The Permittee of a non-emergency internal combustion engine that is greater than 3,000 horsepower, or has a displacement greater than or equal to 10 liters per cylinder, or is a pre-2007 model year engine that is greater than 175 horsepower and not certified shall:

a. Submit an initial notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. The notification shall include:

i. Name and address of the owner or operator;

ii. The address of the affected source;

- iii. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
 - iv. Emission control equipment; and
 - v. Fuel used.
- b. Keep records of the following information:
- i. All notifications submitted to comply with this Section and all documentation supporting any notification;
 - ii. Maintenance conducted on the engine;
 - iii. If the internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards; or
 - iv. If the internal combustion engine is not a certified engine, documentation that the engine meets the emission standards.

4. Monitoring and Record Keeping Requirements

a. The Permittee of a 2007 model year and later internal combustion engine that is required to comply with the emission standards specified in Conditions III.B.2.a or III.B.2.b, shall comply by purchasing an engine certified to the emission standards in Condition III.B.2, 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)]

b. The Permittee of a fire pump engine that is manufactured during or after the model year that applies to the fire pump engine power (EP) rating in the following table and is required to comply with the emission standards specified in Conditions III.C.1.b, III.D.1.b, and III.E.1.b, shall comply by purchasing an engine certified to the emission standards in Conditions III.C.1.b, III.D.1.b, and III.E.1.b, 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.

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

[40 CFR 4211(c)]

- c. 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 Conditions III.C.1.a, III.D.1.a, III.D.1.c, III.E.1.a, and III.F.1, shall demonstrate compliance according to one of the methods specified below:
 - i. 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.
 - ii. 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.
 - iii. Keeping records of engine manufacturer data indicating compliance with the standards.
 - iv. Keeping records of control device vendor data indicating compliance with the standards.
 - v. 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)]
- d. A fire pump engine that is manufactured prior to the model years specified in Condition III.B.4.b and is required to comply with the emissions standards specified in Conditions III.C.1.b, III.D.1.b, and III.E.1.b, shall demonstrate compliance according to one of the methods specified in Condition III.B.4.c.i through III.B.4.c.v.
[40 CFR 60.4211(b)]
- e. An internal combustion engine that is required to comply with the emission standards specified in Conditions III.C.1.c or III.D.1.c shall demonstrate compliance according to the requirements specified below:
 - i. Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in 40 CFR 60.4213.
 - ii. For engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in 40 CFR 60.4213.
[40 CFR 60.4211(d)]
- f. 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]

5. Testing Requirements [40 CFR 60.4212 and 60.4213]

- a. 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.
- b. The Permittee of an internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder shall conduct performance tests according to 40 CFR 60.4213.

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

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.4201(a), (b), (c), and (d), 60.4202(a), (b), and (c), 60.4204(b), 60.4205(b), 60.4206, 60.4207(a) and (b), 60.4209(a), 60.4211(a), (b), (c), (d) and (e), 60.4212, 60.4213, and 60.4214(a).

C. Particulate Matter

1. Emissions Limitations and Standards

- a. Pre-2007 model year engines with a displacement of less than 10 liters per cylinder shall meet the following particulate matter emission standards:

Maximum Engine Power (EP) (horsepower)	Emissions Limit (grams/horsepower-hour)
EP<11	0.75
11≤EP<50	0.60
50≤EP<175	N/A
EP≥175	0.40

[40 CFR 60.4204(a) and 60.4205(a)]

- b. Fire pump engines with a displacement of less than 30 liters per cylinder shall meet the following particulate matter emission standards:

Maximum Engine Power (EP) (horsepower)	Model year	Emissions Limit (grams/horsepower-hour)
EP<11	2010 and earlier	0.75
	2011 and later	0.30
11≤EP<25	2010 and earlier	0.60
	2011 and later	0.30
25≤EP<50	2010 and earlier	0.60
	2011 and later	0.22
50≤EP<75	2010 and earlier	0.60
	2011 and later	0.30
75≤EP<100	2010 and earlier	0.60

	2011 and later	0.30
100≤EP<175	2009 and earlier	0.60
	2010 and later	0.22
175≤EP<300	2008 and earlier	0.40
	2010 and later	0.15
300≤EP<600	2008 and earlier	0.40
	2009 and later	0.15
600≤EP<750	2008 and earlier	0.40
	2009 and later	0.15
EP≥750	2007 and earlier	0.40
	2008 and later	0.15

[40 CFR 60.4205(c)]

- i. For model years 2011 through 2013, fire pump engines that are greater than 50 horsepower, but less than 100 horsepower with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines. [Note 1 to Table 4 to 40 CFR Subpart III]
- ii. For model years 2010 through 2012, fire pump engines that are greater than 100 horsepower, but less than 175 horsepower with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines. [Note 2 to Table 4 to 40 CFR Subpart III]
- c. Engines with a displacement of greater than 30 liters per cylinder shall meet the following emission standards:
 - i. Reduce PM emissions by 60% or more; or
 - ii. Limit the emissions of PM in the engine exhaust to 0.11 grams per horsepower-hour [40 CFR 60.4204(c)(2) and 60.4205(d)(2)]

2. Air Pollution Control Requirements

If a non-emergency engine is equipped with a diesel particulate filter to comply with the emission standards in Condition III.C.1, 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 and -331.a.3.d and e]

[Material permit conditions are indicated by underline and italics]

3. Monitoring and Record Keeping Requirements

- a. If a non-emergency engine is equipped with a diesel particulate filter to comply with the emission standards in Condition III.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. 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 onsite and made available to ADEQ upon request. [40 CFR 60.4211(a) and A.A.C. R18-2-306.A.3]
- c. If the 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)]
- d. If the Permittee elects to meet the emission limitations contained in Condition III.C.1.b.i or ii, 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]

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

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.4204(a), 60.4204(c)(2), 60.4205(a), 60.4205(c), 60.4205(d)(2), 60.4209(b), 60.4211(a), and 60.4214(c).

D. Nitrogen Oxides

1. Emissions Limitations and Standards

- a. Pre-2007 model year internal combustion engines, that are not fire pump engines, that have a displacement of less than 10 liters per cylinder shall meet the following emission standards:

Maximum Engine Power (EP) (horsepower)	Emissions Limit (grams/horsepower-hour)
EP<11	7.8*
11≤EP <50	7.1*
EP≥50	6.9

* indicates nonmethane hydrocarbons (NMHC)+NO_x [40 CFR 60.4204(a) and 60.4205(a)]

- b. Fire pump engines that have a displacement of less than 30 liters per cylinder shall meet the following emission standards:

Maximum Engine Power (EP) (horsepower)	Model year	Emissions Limit* (grams/horsepower-hour)
EP<11	2010 and earlier	7.8
	2011 and later	5.6
11≤EP <25	2010 and earlier	7.1
	2011 and later	5.6
25≤EP <50	2010 and earlier	7.1
	2011 and later	5.6
50≤EP <75	2010 and earlier	7.8

	2011 and later	3.5
75≤EP <100	2010 and earlier	7.8
	2011 and later	3.5
100≤EP <175	2009 and earlier	7.8
	2010 and later	3.0
175≤EP <300	2008 and earlier	7.8
	2010 and later	3.0
300≤EP <600	2008 and earlier	7.8
	2009 and later	3.0
600≤EP <750	2008 and earlier	7.8
	2009 and later	3.0
EP≥750	2007 and earlier	7.8
	2008 and later	4.8

* indicates NMHC+NO_x

[40 CFR 60.4205(c)]

- i. For model years 2011 through 2013, fire pump engines that are greater than 50 horsepower, but less than 100 horsepower with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines. [Note 1 to Table 4 to 40 CFR Subpart IIII]
- ii. For model years 2010 through 2012, fire pump engines that are greater than 100 horsepower, but less than 175 horsepower with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines. [Note 2 to Table 4 to 40 CFR Subpart IIII]
- c. Pre-2007 model year internal combustion engines that have a displacement of greater than 10 liters per cylinder but less than 30 liters per cylinder that are not fire pump engines shall comply with the emission standards in 40 CFR 94.8(a)(1) as follows: [40 CFR 60.4204(a) and 60.4205(a)]
 - i. 17.0 g/kW-hr when the maximum test speed is less than 130 rpm.
 - ii. $45.0 \times N^{-0.20}$ g/kW-hr when the maximum test speed is at least 130 but less than 2000 rpm, where N is the maximum test speed of the engine in revolutions per minute.
 - iii. 9.8 g/kW-hr when the maximum test speed is 2000 rpm or more.
 - iv. All speed-dependent standards in this Part shall be rounded to the nearest 0.1 g/kW-hr
- d. Internal combustion engines with a displacement of greater than 30 liters per cylinder shall meet the following emission standards:
 - i. Reduce NO_x emissions by 90% or more; or

- ii. Limit the emissions of NO_x in the engine exhaust to 1.2 grams per horsepower-hour

[40 CFR 60.4204(c)(1) and 60.4205(d)(1)]

- e. If the Permittee elects to meet the emission limitations contained in Condition III.D.1.b.i or ii, 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]

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

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.4204(a), 60.4204(c)(1), 60.4205(a), 60.4205(c), and 60.4205(d)(1).

E. Carbon Monoxide

- 1. Emissions Limitations and Standards

- a. Pre-2007 model year internal combustion engines with a displacement of less than 10 liters per cylinder shall meet the following emission standards:

Maximum Engine Power (EP) (horsepower)	Emissions Limit (grams/horsepower-hour)
EP<11	6.0
11≤EP<25	4.9
25≤EP<50	4.1
50≤EP<175	N/A
EP≥175	8.5

[40 CFR 60.4204(a) and 60.4205(a)]

- b. Fire pump engines that have a displacement of less than 30 liters per cylinder shall meet the following emission standards:

Maximum Engine Power (EP) (horsepower)	Model year	Emissions Limit* (grams/horsepower-hour)
EP<11	2010 and earlier	6.0
	2011 and later	N/A
11≤EP<25	2010 and earlier	4.9
	2011 and later	N/A
25≤EP<50	2010 and earlier	4.1
	2011 and later	N/A
50≤EP<75	2010 and earlier	3.7
	2011 and later	N/A
75≤EP<100	2010 and earlier	3.7
	2011 and later	N/A
100≤EP<175	2009 and earlier	3.7
	2010 and later	N/A
175≤EP<300	2008 and earlier	2.6
	2010 and later	N/A
300≤EP<600	2008 and earlier	2.6

	2009 and later	N/A
600≤EP<750	2008 and earlier	2.6
	2009 and later	N/A
EP≥750	2007 and earlier	2.6
	2008 and later	N/A

[40 CFR 60.4205(c)]

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

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.4204(a), 60.4205(a) and 60.4205(c).

F. Hydrocarbon

1. Emissions Limitations and Standards

Pre-2007 model year internal combustion engines that have a displacement of less than 10 liters per cylinder and a maximum engine power rating greater than or equal to 175 horsepower shall not emit more than 1.0 gram of hydrocarbons per horsepower hour. [40 CFR 60.4204(a) and 60.4205(a)]

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

Compliance with the conditions of this Part shall be deemed compliance with 40 CFR 60.4204(a) and 60.4205(a).

IV. GENERATORS NOT SUBJECT TO NSPS

A. Applicability

This Section applies to internal combustion engines marked as not subject to NSPS on the associated ATO.

B. Particulate Matter and Opacity

1. Emission Limitations and Standards [A.A.C. R18-2-719.B, -719.C.1, and -719.E]
[Material permit conditions are indicated by underline and italics]

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

$$E = 1.02 Q^{0.769} \text{ where:}$$

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 in Condition IV.B.1.a. 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.

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

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

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

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

- a. The Permittee shall conduct an opacity survey for each generator stack at least quarterly when the generator is in operation. For the purposes of this permit, an opacity survey is a verification that abnormal emissions are not present at the generator stack. The opacity survey shall be conducted by a person who is EPA Reference Test Method 9 certified. If abnormally high emissions are observed from the opacity survey, the Permittee shall determine the cause of the abnormal emissions and take corrective action in order to reduce the emissions to a normal operating level which does not exceed 40% opacity.

- b. For each opacity survey required in Condition IV.B.2.a above, the Permittee shall record the date and time of the survey, the name of the person conducting the survey, the results of the survey, and the type of corrective action taken (if required).
- c. The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request

3. Testing Requirement

The Permittee shall conduct performance tests at such times as may be required by the Director.

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

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

C. Sulfur Dioxide

1. Emission Limitations and Standards

- a. 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]
- b. The Permittee shall not burn high sulfur diesel fuel (sulfur content greater than 0.9 % by weight) in the generator(s). [A.A.C. R18-2-719.H]

2. Monitoring, Recordkeeping, and Reporting

- a. The Permittee shall keep daily records of the sulfur content and lower heating value of the fuel being fired in the generator(s). The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the sulfur content limit specified in this Condition IV.C.1.b. The certification shall contain the sulfur content of the fuel and the method used to determine the sulfur content of the fuel. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c and -719.I]
- b. 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 [A.A.C. R18-2-325]

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.

V. NON-ROAD ENGINES

[A.A.C. 18-2-306.A.3.c]

Recordkeeping Requirement

The Permittee shall keep a log of following information for each engine that has been determined to be 'non-road' by the Director.

- A. Date that the engine is brought to the facility;
- B. Make, model, serial number and capacity of the engine; and
- C. Date that the engine is removed from the facility

These records shall be made available upon request.

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**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

**ATTACHMENT "E"
SPECIFIC CONDITIONS FOR
COLLOCATED CRUSHING AND SCREENING PLANTS**

I. APPLICABILITY OF THE COLLOCATED CRUSHING AND SCREENING PLANT

[A.A.C. R18 2 306.01]

- A.** For the purposes of this permit, the collocated crushing and screening plant refers to the collocation of stationary or portable crushing and screening equipment with the hot mix asphalt plant covered by this air quality control permit.
- B.** Crushing and screening equipment is considered collocated when all of the following apply:
1. The equipment is located on property that is contiguous or adjacent to the hot mix asphalt facility;
 2. The equipment is under the same or common control; and
 3. Belongs to the same industrial grouping.

II. GENERAL REQUIREMENTS

A. Operational Limitations

[A.A.C. R18-2-306.A.2 and -302]

All collocated crushing and screening equipment that will be used under this Alternate Operating Scenario shall be currently permitted by the Department. At the starting time of the collocation, all crushing and screening equipment shall cease to operate in accordance with the conditions of its existing permit, and only the collocated equipment shall be allowed to operate in accordance with the rules set forth in this permit. At the end of the collocation, all crushing and screening equipment shall resume operation in accordance with the conditions set forth in the existing permit.

B. Air Pollution Control Requirements

1. *Water spray bars or equivalent control equipment shall be used on all crushers and screens whenever the equipment is operating or material must be adequately wet to minimize visible emissions to the extent practicable.*

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

[Material permit conditions are indicated by underline and italics]

2. *At all times, including periods of startup, shutdown and malfunction, the Permittee shall to the extent practicable, install, maintain and operate a baghouse or wet scrubber on the lime silo in a manner consistent with good air pollution control practice for minimizing emissions.*

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

[Material permit conditions are indicated by underline and italics]

3. Loading of lime storage silos shall be conducted in such a manner that the displaced air does not by-pass the baghouse and will not be directly vented to the atmosphere. [A.A.C. R18-2-306.A.2]

C. Monitoring , Recordkeeping and Reporting Requirements

1. The Permittee shall install, calibrate, maintain, and operate monitoring devices, which can be used to determine daily the process weight of gravel or crushed stone produced. The weighing devices shall have an accuracy of $\pm 5\%$ over their operating range. [A.A.C. R-18-2-306.A.4 and -331.A.c]
[Material permit conditions are indicated by underline and italics]
2. Beginning from the date of issuance of ATOs under this General Permit, a certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the crushing & screening plant. If the opacity of the emissions observed appears to exceed the opacity limit contained in Condition IV.B.1.b, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition IV.B.1.b, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A". [A.A.C. R-18-2-306.A.3.c]
3. The Permittee shall conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the crushing & screening plant. The Permittee shall keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition IV.B.1.b, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XII.A.1 of Attachment "A". [A.A.C. R-18-2-306.A.3.c]
4. The Permittee shall maintain logs of all maintenance activities performed on the crushing & screening plant equipment. These logs shall be maintained on-site and shall be readily available to ADEQ representatives upon request.
5. The Permittee shall maintain records of the daily process weight of sand, gravel or crushed stone produced by the crushing and screening equipment. [A.A.C. R18-2-306.A.3.c, -306.A.4]

III. NSPS REQUIREMENTS

A. Applicability

1. An NSPS crushing and screening facility is defined as any combination of the following equipment that commenced construction, reconstruction, or modification after August 31, 1983: [40 CFR 60.670(a) and (e)]

- a. Crushers;
 - b. Grinding mills;
 - c. Screening operations;
 - d. Bucket elevators;
 - e. Belt conveyors;
 - f. Bagging operations;
 - g. Storage bins;
 - h. Enclosed truck or railcar loading stations;
2. Facilities at the following plants are not subject to the requirements of this Section:
- a. Fixed sand and gravel plants and crushed stone plants with capacities of 23 megagrams per hour (25 tons per hour) or less; [40 CFR 60.670(c)(1)]
 - b. Portable sand and gravel plants and crushing stone plants with capacities of 136 megagrams per hour (150 tons per hour) or less; and [40 CFR 60.670(c)(2)]
 - c. Common clay plants and pumice plants with capacities of 9 megagrams per hour (10 tons per year) or less. [40 CFR 60.670(c)(3)]
 - d. All facilities located in underground mines; and stand-alone screening operations at plants without crushers or grinding mills. [40 CFR 60.670(a)(2)]

B. Notification Requirements

1. The Permittee shall furnish to the Director and Administrator for all new facilities that were not previously permitted a written notification as follows:
- a. A notification of the date construction or reconstruction (as defined under 40 CFR §60.15 and §60.673) of the permitted facility is commenced postmarked no later than 30 days after such date. [40 CFR 60.7(a)(1)]
 - b. A notification of the actual date of initial startup of a permitted facility postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]
2. The Permittee shall furnish to the Director and Administrator for any affected facility subject to Section of this Attachment, a written notification as follows: [40 CFR 60.7(a)(4)]
- a. A notification of any physical or operational change to an affected facility subject to Section III of this Attachment, which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e).
 - b. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control

systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Director may request additional relevant information subsequent to this notice.

3. A notification of the actual date of initial startup of each affected facility shall be submitted to the Director
 - a. For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the Permittee to the Director. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available. [40 CFR 60.676(I)(1)]
 - b. For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant. [40 CFR 60.676(I)(2)]

C. Particulate Matter and Opacity [Material permit conditions are indicated by underline and italics]

1. Emission Limitations/Standards

- a. Crusher Operations [40 CFR 60.672(c) and A.A.C. R18-2-331.A.3.f]

The Permittee shall not allow to be discharged into the atmosphere from any crusher, at which a capture system is not used, any process fugitive emissions which exhibit visible emissions greater than 15 percent opacity.

- b. Screening, Conveyor, and Truck/Railcar Loading Operations

- i. *The Permittee shall not allow to be discharged into the atmosphere from any transfer point on belt conveyors any fugitive emissions which exhibit visible emissions greater than 10 percent opacity.* [40 CFR 60.672(b) and A.A.C. R18-2-331.A.3.f]

- ii. The Permittee shall not allow to be discharged into the atmosphere from any transfer points on belt conveyors or any other affected facility stack emissions, any emissions which contain particulate matter in excess of 0.05 grams per dry standard cubic meter (0.022 grains per dry standard cubic foot). [40 CFR 60.672(a)(1)]

- iii. *The Permittee shall not allow to be discharged into the atmosphere from any transfer point on a belt conveyor or any other stack emission which exhibit greater than 7 percent opacity.* [40 CFR 60.672(a)(2) and A.A.C. R18-2-331.A.3.f]

- c. Operations Enclosed in a Building
[40 CFR 60.672(e), -672(a), -672(f) and A.A.C. R18-2-331A.3.f]

If any portion of the operation is enclosed in a building, the building must comply with the following requirements:

- i. The Permittee shall not allow to be discharged into the atmosphere from the building any visible fugitive emissions except for emissions from the vent, and
- ii. The Permittee shall not allow to be discharged into the atmosphere from any vent of the building any gases which contain particulate matter in excess of 0.05 grams per dry standard cubic meter (0.022 grains per dry standard cubic foot) and exhibit greater than 7 percent opacity.

- d. Wet Screening Operations [40 CFR 60.672(h), and A.A.C. R18-2-331A.3.f]

The Permittee shall not allow to be discharged into the atmosphere any visible emissions from:

- i. Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin.
- ii. Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

- e. The Permittee shall not allow to be discharged into the atmosphere from any baghouse that controls emissions from only an individual, enclosed storage bin, stack emissions which exhibit greater than 7 percent opacity.
[40 CFR 60.675(f) and A.A.C. R18-2-331A.3.f]

2. Monitoring, Recordkeeping and Reporting Requirements

[40 CFR § 674 and A.A.C. R18-2-331A.3.c]

[Material permit conditions are indicated by underline and italics]

- a. If a wet scrubber is used to control emissions, the Permittee shall install, calibrate, maintain and operate the following monitoring devices:

- i. Pressure Loss:

A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be

calibrated on an annual basis in accordance with manufacturer's instructions.

ii. Liquid Flow Rate:

A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

b. Wet Operations

The Permittee of any screening operation, bucket elevator, or belt conveyor that processes saturated material and is subject to Condition III.C.1.d and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the 10 percent opacity limit in Condition III.C.1.b.i and the emission test requirements of §60.11. Likewise a screening operation, bucket elevator, or belt conveyor that processes unsaturated material but subsequently processes saturated material shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the no visible emission limit in Condition III.C.1.d. [40 CFR 60.676(g)]

c. Wet Scrubber

i. During the initial performance test of a wet scrubber, and daily thereafter, the Permittee shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate. [40 CFR 60.676(c)]

ii. After the initial performance test of a wet scrubber, the Permittee shall submit semiannual reports to the Director of occurrences when the measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than ± 30 percent from the averaged determined during the most recent performance test. [40 CFR 60.676(d)]

iii. The reports required under Condition III.C.2.c.ii above shall be postmarked within 30 days following end of the second and fourth calendar quarters. [40 CFR 60.676(e)]

d. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in Condition III.C.1 including reports of opacity observations made using Method 9 to demonstrate compliance with and reports of observations using Method 22. [40 CFR 60.676(f)]

3. Testing Requirements

a. Conveyor Operation and Crushing and Screening Operations

- i. For the purposes of determining compliance with the applicable opacity limits, the Permittee shall conduct or cause to be conducted the tests and procedures set forth in EPA Reference Method 9. [40 CFR 60.11(b) and 675(b)(2)]
- ii. When determining compliance with Condition III.C.1.b.i of this attachment, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply: [40 CFR 60.675(c)(3)]
 - (a) There are no individual readings greater than 10 percent opacity; and
 - (b) There are no more than 3 readings of 10 percent for the 1-hour period.
- iii. When determining compliance with Condition III.C.1.a and III.C.1.b.i above, the following conditions apply: [40 CFR 60.675(c)(1)]
 - (a) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
 - (b) The observer, when possible, shall select a position that minimizes interference from other fugitive emission sources. The required observer position relative to the sun (Method 9, Section 2.1) must be observed.
 - (c) When using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
- iv. When determining compliance with Condition III.C.1.a above, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply: [40 CFR 60.675(c)(4)]
 - (a) There are no individual readings greater than 15 percent opacity; and

(b) There are no more than 3 readings of 15 percent for the 1-hour period.

v. Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121°C (250 °F), to prevent water condensation on the filter.

[40 CFR 60.675(b)(1)]

b. Operations Enclosed in a Building

[40 CFR 60.675(d)]

In determining compliance with Condition III.C.1.c above, the Permittee shall use Method 22 to determine fugitive emissions. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

b. Wet Screening Operations

[40 CFR 60.675(h)]

Initial Method 9 performance tests are not required for:

i. Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin.

ii. Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

c. In determining compliance with Condition III.C.1.e of this attachment, using Method 9, the duration of Method 9 observations shall be 1 hour (ten minute averages).

[40 CFR 60.675(c)(2)]

e. If emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

[40 CFR 60.675(e)]

i. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

ii. Separate the emissions so that the opacity of emissions from each affected facility can be read.

f. If, after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting any rescheduled performance test required in this section, the Permittee shall submit a notice to the Director at least 7 days prior to any rescheduled performance test. [40 CFR 60.675(g)]

g. Time Periods [40 CFR 60.11(e)(1)]

Opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial start-up of the facility.

4. Permit Shield [A.A.C. R-18-2 325]

Compliance with Conditions of this Section shall be deemed compliance with 40 CFR 60.670(a), 40 CFR 60.670(c), 40 CFR 60.670(e), 40 CFR 60.670(f), 40 CFR 60.672(a), 40 CFR 60.672(b), 40 CFR 60.672(c), 40 CFR 60.672(e), 40 CFR 60.672(f), 40 CFR 60.672(h), 40 CFR 60.674, 40 CFR 60.675(b), 40 CFR 60.675(c), 40 CFR 60.675(d), 40 CFR 60.675(e), 40 CFR 60.675(g), 40 CFR 60.675(h), 40 CFR 60.676(a), 40 CFR 60.676(c), 40 CFR 60.676(d), 40 CFR 60.676(f), 40 CFR 60.676(g), 40 CFR 60.676(h) and 40 CFR 60.676(i).

IV. NON - NSPS REQUIREMENTS [A.A.C. R18 2 .722.A]

A. Applicability

Non-NSPS crushing and screening facility is defined as any combination of the following equipment that was constructed on or before August 31, 1983:

1. Rock crushers;
2. Screens;
3. Conveyors and conveyor transfer points;
4. Stackers;
5. Auxiliary Lime Silos
6. Reclaimers;
7. All gravel or crushed stone processing plants;
8. Any portable sand and gravel plants and crushed stone plants with capacities greater than 150 tons per hour.

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere, except as fugitive emissions, in any one hour from any gravel or crushed stone processing plant in total quantities in excess of the amounts calculated by one of the following equations:

i. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum

allowable particulate emissions shall be determined by the following equation:

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

where:

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

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

[A.A.C. R18-2-722.B.1]

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

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

Where:

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

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

[A.A.C. R18-2-722.B.2]

b. Opacity

The Permittee shall not cause, allow or permit visible emissions in excess of 20 percent opacity, as measured by EPA Reference Method 9, from any gravel or stone crushing processes. [A.A.C. R18-2-702.B]

2. Air Pollution Controls

- a. Spray bar pollution control shall be utilized in accordance with “EPA Control of Air Emissions From Process Operations in the Rock Crushing Industry” (EPA 340/1-79-002), and “Wet Suppression System” (pages 15-34, amended as of January, 1979 (and no future amendments or editions), as incorporated herein by reference and on file with the Office of the Secretary of State, with placement of spray bars and nozzles as required by the Director to minimize air pollution. [A.A.C. R18-2-722.D]
- b. Fugitive emissions from operation of gravel or crushed stone processing shall be controlled in accordance with Condition III.B.1.b.i through viii of Attachment “B”. [A.A.C. R18-2-722.E]

3. Monitoring and Recordkeeping Requirements

[Material permit conditions are indicated by underline and italics]

- a. *The Permittee shall install, calibrate, maintain, and operate monitoring devices which can be used to determine daily the process weight of sand,*

gravel or crushed stone produced. The weighing devices shall have an accuracy of plus or minus 5 percent over their operating range.

[A.A.C. R18-2-722.F and -331.A.3.c]

b. The Permittee shall maintain records of the daily production rate of gravel or crushed stone produced. [A.A.C. R18-2-722.G]

4. Permit Shield [A.A.C. R-18-2 325]

Compliance with Conditions of this Section shall be deemed compliance with A.A.C. R18-2-702.B, A.A.C. R18-2-722.A, A.A.C. R18-2-722.B, A.A.C. R18-2-722.D, A.A.C. R18-2-722.E, A.A.C. R18-2-722.F, and A.A.C. R18-2-722. G.

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**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

**ATTACHMENT "F"
SPECIFIC CONDITIONS FOR
COLLOCATED CONCRETE BATCH PLANTS**

I. APPLICABILITY OF THE COLLOCATED CONCRETE BATCH PLANT

[A.A.C. R18 2 306.01]

- A.** For the purposes of this permit, the collocated concrete batch plant refers to the co location of portable or stationary concrete batch plant equipment with the hot mix asphalt plant covered by this air quality control permit.
- B.** Concrete batch plant equipment is considered collocated when all of the following apply:
1. The equipment is located on property that is contiguous or adjacent to the hot mix asphalt facility;
 2. The equipment is under same or common control; and
 3. Belongs to the same industrial grouping.

II. OPERATIONAL LIMITATIONS

[A.A.C. R18 2 306.A.2, -306.01]

All collocated concrete batch plant equipment that will be used under this Alternate Operating Scenario shall be currently permitted by the Department. At the starting time of the collocation, all concrete batch plant equipment shall cease to operate in accordance with the conditions of its existing permit, and only the collocated equipment shall be allowed to operate in accordance with the rules set forth in this permit. At the end of the collocation, all concrete batch plant equipment shall resume operation in accordance with the conditions set forth in the existing permit.

III. CONCRETE BATCH PLANT REQUIREMENTS

Particulate Matter and Opacity Standards

A. Emission Limitations and Standards

1. The Permittee shall not cause, allow or permit visible emissions from in excess of 20 percent opacity, as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]
2. Fugitive dust emissions from the concrete batch plant shall be controlled in accordance with Condition III.B.1.b.i through viii of Attachment "B".
[A.A.C. R18-2-723]

B. Air Pollution Controls

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

[Material permit conditions are indicated by underline and italics]

1. *At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, install maintain and operate a scrubber or a baghouse on the cement/fly ash silo in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.*

2. Loading of cement/fly ash storage silos shall be conducted in such a manner that the displaced air does not by-pass the baghouse and is not direct-vented to the atmosphere.
3. For truck-mix facilities, a rubber sleeve, or equivalent, shall be installed and maintained on the product delivery system to minimize visible emissions during material transfer to trucks.

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

3. Beginning from the date of issuance of ATOs under this General Permit, a certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the concrete batch plant. If the opacity of the emissions observed appears to exceed the limit contained in Condition III.A, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.A, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".
2. The Permittee shall conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the concrete batch plant. The Permittee shall keep a record of the emission point being observed, name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.A, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".
3. The Permittee shall maintain logs of all maintenance activities performed on the concrete batch plant. These logs shall be maintained on-site and shall be readily available to ADEQ representatives upon request.

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

Compliance with the Conditions of this Section shall be deemed compliance with A.A.C. R18-2-723 and A.A.C. R18-2-702.B.

**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

**ATTACHMENT "G"
ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN MARICOPA COUNTY**

I. APPLICABILITY

While operation in Maricopa County, the Permittee shall also comply with the Conditions set forth in Attachments "A", "B", "C", "D", "E" and "F". Whenever more than one Condition in this Attachment regulating the same emissions applies to any emissions unit, or whenever a Condition in this Attachment "G" and a Condition in earlier attachments "A", "B", "C", "D", "E" and "F" 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.

II. FACILITY WIDE LIMITATION

A. Opacity

Emission Limitations and Standards

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% opacity.

[State and locally enforceable only]
[Rule 300 §301]

B. Fuel Limitation

1. Permitted Fuel [Rule 324 §301.1]

The Permittee shall only use diesel fuel that contains no more than 0.05% sulfur by weight.

2. Monitoring, Reporting and Recordkeeping

- a. Low Sulfur Oil Verification: If the Director requests proof of the sulfur content, the Permittee shall submit fuel receipts, contract specifications, pipeline meter tickets, Material Safety Data Sheets (MSDS), fuel supplier information or purchase records, if applicable, from the fuel supplier, indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur content to meet the 0.05% limit shall be permitted if so desired by the Permittee for evidence of compliance.

[Rule 324 §501.4]

- b. The Permittee shall maintain a monthly record which shall include the hours of operation, the type of fuel used and documentation verifying compliance with the fuel sulfur content.

[Rule 324 § 502.2]

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

Compliance with Conditions of this Part shall be deemed compliance with Maricopa County Rule 324 §301, 324 §501 and 324 §502.

- C. Gaseous and Odorous Emissions [Rule 320 §300]

The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under their control in such quantities or concentrations as to cause air pollution.

- D Air Pollution Control Requirements

1. Material Containment Required [Rule 320 §302]

Materials including, but not limited to solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

2. Stack Requirements [Rule 320 §303]

Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

3. Operations and Maintenance (O&M) Plan

For the purposes of these conditions, an emission control system (ECS) is a system for reducing emissions of particulates, consisting of both collection and control devices, which are approved in writing by the Director and are designed and operated in accordance with good engineering practices.

a. The Permittee shall provide and maintain, readily available on-site at all times, (an) O&M plan(s) for any ECS, any other emission processing equipment, and any ECS monitoring devices that are used pursuant to these conditions. [Rule 316 §305.1.a]

b. The Permittee shall submit to the Director for approval the O&M Plan(s) for each ECS and ECS monitoring device that is used pursuant to these conditions. [Rule 316 §305.1.b]

c. The Permittee shall comply with all identified actions and schedules provided in each O&M Plan. [Rule 316 §305.1.c]

- d. The Permittee shall install, maintain and calibrate monitoring devices described in the O&M Plan. The monitoring devices shall measure pressures, rates of flow, or other operating conditions necessary to determine if the control devices are functioning properly.

[State and locally enforceable only]

[Rules 316 §305.2 and 100 §200.63(a)(3)(c)]

[Material permit conditions are indicated by underline and italics]

- e. The Permittee must fully comply with all O&M Plans that the Permittee has submitted for approval, even if such O&M Plans have not yet been approved, unless notified in writing by the Director. [Rule 316 §305.3]

4. Monitoring/Recordkeeping/Reporting Requirements

a. Opacity Requirements

- i. The Permittee shall weekly conduct a facility walk-through and observe visible emissions from all equipment capable of emitting visible emissions. The Permittee shall log the visual observations, including the date and time when the reading was taken, results of the reading, name of the person who took the reading and any other related information. [Rule 210 §302.1.c]

[State and locally enforceable only]

- ii. Opacity shall be determined by observation of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except opacity of visible emissions from intermittent sources as defined by County Rule 300 §201. Opacity of visible emissions from intermittent sources shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 24 consecutive readings shall be required at 15-second intervals for the averaging time. [Rule 300 §502]

- b. Odor Log [Rule 210 §302.1.c(2)]

The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

- c. Operational Recordkeeping [Rule 316 §501.2.a]

The Permittee shall keep records for all days that the facility is actively operating. The records shall include all of the following:

- i. Hours of operation;
- ii. Type of batch plant (wet, dry, central)

- iii. Throughput per day of basic raw materials including sand, aggregate, cement (tons/day)
 - iv. Volume of concrete produced per day;
 - v. Volume of aggregate mined per day (cubic yards/day); and
 - vi. Amount of each basic raw materials including sand, aggregate, cement, flyash, delivered per day (tons/day)
- d. Control and Monitoring Device Data [Rule 316 §501.2.c]

The Permittee shall keep records for all days that the facility is actively operating. The records shall include all of the following:

- i. For a fabric filter baghouse
 - a) Date of inspection
 - b) Date and designation of bag replacement;
 - c) Date of service or maintenance related activities; and
 - d) Time, date, and cause of fabric filter baghouse failure and/or down time, if applicable.
 - ii. For a scrubber:
 - a) Date of service or maintenance related activities;
 - b) Liquid flow rate;
 - c) Other operating parameters that need to be monitored to assure that the scrubber is functioning properly and operating within design parameters; and
 - d) Time, date, and cause of scrubber failure and/or down time, if applicable.
- e. Operating and Maintenance Plan Records [Maricopa County Rule 316 §501.3]
- i. Period of time that an approved emission control system is operating to comply with the conditions in this permit;
 - ii. Period of time that an approved emission control system is not operating;
 - iii. Flow rates;
 - iv. Pressure drops;

- v. Other conditions necessary to determine if the approved emission control system is functioning properly;
 - vi. Results of visual inspections; and
 - vii. Correction action taken, if necessary.
- f. The Permittee shall keep all operational information required by Conditions II.C.4.c, d, and e, in a complete and consistent manner on site and shall be made available without delay to the Director upon request.
[Rule 316 §501.1]
- g. Dust Control Plan Submission
- i. All Dust Control Plans shall be submitted to the Department along with each move notice that notifies the Department of movement into or within Maricopa County. [Rule 310]
 - ii. For each site within Maricopa County that the Permittee operates, a Dust Control Plan shall be submitted to the ADEQ Inspections and Field Services Unit. The Dust Control Plan shall describe all control measures to be implemented to control dust generating operations. [Rule 310]
 - iii. All Dust Control Plans shall, at a minimum, contain the elements of information required by Rule 310 of the Maricopa county rules. [Rule 310]
 - iv. Unless the Permittee receives an official determination from the Department stating the contrary, all Dust Control Plans shall be deemed approved by default ten days after submission. [Rule 310]
 - v. The Permittee shall compile, maintain, and retain records as described in Rule 310 of the Maricopa County Rules.
[Rule 316 §501.4]
- h. Should the Permittee have obtained an Authorization to Operate for any internal combustion engine, but still desire to operate more than the allowable corresponding hours of operation inside Maricopa County as listed in the ATO, the Permittee shall submit to the Department a certification that states that the internal combustion engine(s) will not be operated within Maricopa County and that the Permittee shall use commercial electricity to power the equipment covered under this General Permit. Any such certifications shall be submitted along with each move notice notifying the Department of any movement into or within Maricopa County. [A.A.C. R18-2-306.01.A.3.a]

- i. When operating inside of Maricopa County, the Permittee shall maintain a copy of all earth moving permits obtained from Maricopa County on site and available for review upon request. [A.A.C. R18-2-306.01.A.3.c and 306.A.4]
- j. When operating inside of Maricopa County, the Permittee shall maintain a copy of the most recently approved Dust Control Plan on site and available for review upon request. [A.A.C. R18-2-306.01.A.3.c and 306.A.4]

5. Testing Requirements

The following test methods shall be used as appropriate:

- a. Grain Loading: Particulate matter and associated moisture content shall be determined using the applicable EPA Reference Methods 1 through 5, 40 CFR Part 60, Appendix A. [Rule 316 §502.1]
- b. Opacity Determination: Opacity observations to measure the opacity of visible emissions shall be conducted in accordance with the techniques specified in EPA Reference Method 9, 40 CFR Part 60, Appendix A, except the opacity observations for intermittent visible emissions shall require 12 (rather than 24) consecutive readings at 15-second intervals. [Rule 316 §502.2]

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

Compliance with the conditions of this Section shall be deemed compliance with Maricopa County Rules 300 §301, 320 §300, 320 §302, 316 §305.1.a, 316 §305.1.b, 316 §305.1.c, 316 §305.2, 316 §305.3, 316 §501.1, 316 §501.2, 316 §501.3, 316 §501.4, 316 §502.1 and 316 §502.2.

III. HOT MIX ASPHALT PLANT [Rule 316§302]

Particulate Matter

A. Emission Limitations/Standards

The Permittee shall not discharge or cause to be discharged into the ambient air:

- 1. For non-rubberized asphaltic concrete plants, stack emissions exceeding 5% opacity and containing more than 0.04 gr/dscf (90 mg mg/dscm) of particulate matter over a 6-minute period. [Rule 316§302.1.a]
- 2. For rubberized asphaltic concrete plants (when producing rubberized asphalt only), stack emissions exceeding 20% opacity and containing more than 0.04 gr/dscf (90 mg/dscm) of particulate matter over a 6-minute period. [Rule 316§302.1.b]
- 3. From all cement, lime, and/or fly-ash storage silo(s), fugitive dust emissions exceeding 20% opacity. [Rule 316§302.1.c]

B. Air Pollution Control Requirements

The Permittee shall implement all of the following process controls:

1. On all cement, lime, and/or fly-ash storage silo(s), installs an operational overflow warning system/device. The system/device shall be designed to alert operator(s) to stop the loading operation when the cement, lime, and/or fly-ash storage silo(s) are reaching a 316-13 capacity that could adversely impact pollution abatement equipment. [Rule 316§302.2.a]
2. On existing cement, lime, and/or fly-ash storage silo(s), install a properly sized fabric filter baghouse, with an opacity limit of not greater than 5% over a 6-minute period. [Rule 316§302.2.b]
3. On new cement, lime, and/or fly-ash storage silo(s), install a properly sized fabric filter baghouse or equivalent device designed to meet a maximum outlet grain loading of 0.01 gr/dscf, with an opacity limit of not greater than 5% over a 6-minute period. [Rule 316§302.2.c]
4. From all drum dryers, control and vent exhaust to a properly sized fabric filter baghouse, with an opacity limit of not greater than 5% over a 6-minute period. [Rule 316§302.2.d]

C. Monitoring, Record Keeping, and Reporting

1. The Permittee shall meet all of the monitoring and recordkeeping requirements specified in Condition III.B.2 of Attachment “B” and Conditions I.A.1.d, I.A.2.b, III.C.2, & III.D.2 of Attachment “C” in order to comply with Conditions V.C.2 below. [A.A.C R18-2-306.A.3.c]
2. The Permittee shall keep accurate daily records of: [Rule 316 §501.2.a]
 - a. hours of operation;
 - b. throughput of raw materials processed in the plant in tons/day;
 - c. amount of each raw material delivered to the plant in tons/day;
 - d. amount of water used to control fugitive dust emissions from the process equipment.

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

Compliance with the conditions of this Section shall be deemed compliance with Maricopa County Rules 316§302.1 and 316§302.2.

IV. INTERNAL COMBUSTION ENGINES

A. Applicability

1. The provisions of this section are applicable to all internal combustion engines that are operated for the purpose of producing electrical power, except mobile equipment and engines that have been determined by the Director to be non-road engines.
2. An existing engine shall mean an engine that commenced operation prior to October 22, 2003, or an engine on which the construction or modification has commenced prior to October 22, 2003, including the contractual obligation to undertake and complete an order for an engine. [Rule 324 §208]
3. A new engine shall mean any engine that is not an existing engine. [Rule 324 §215]
4. Partial Exemptions for Emergency Engines

Any stationary IC engine operated as an emergency engine for any of the following reasons is exempt from all of the conditions of this Section, except for Conditions IV.B.4.a and c, IV.C.1 and IV.D.1.a, if the engines are:

- 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; [Rule 324 §104.1]
 - 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 the public health and safety. [Rule 324 §104.2]
5. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with Maricopa County Rules 324 §208, 324 §215, 324 §104.1 and 324 §104.2

B. General [Rule 324 §302]

1. Good Combustion Practices/Tuning Procedure

The Permittee shall employ the following procedures to minimize emissions from the engines:

- 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:
 - i. Intake and exhaust valves
 - ii. Spark plugs (if so equipped)
 - iii. Spark timing and dwell or fuel injection timing (if adjustable), and
 - iv. 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; and
- g. Exhaust System: Check for leaks and/or restrictions after 3,000 hours of operation or every year whichever occurs last.

2. Efficiency Allowance [Rule 324 §305]

Each emission limitation expressed in Conditions IV.D.1.b, IV.E.1a.i, and IV.F.1.a.i and of this attachment, may be multiplied by X, where X equals the engine efficiency (E) divided by a reference efficiency of 30 percent. Engine efficiency shall be determined by one of the following methods whichever is higher:

$$E = (\text{Engine Output}) \times (100) \div (\text{Energy Input})$$

Where energy input is determined by a fuel measuring device accurate to $\pm 5\%$ and is based upon the higher heating value (HHV) of the fuel. Percent efficiency (E) shall be averaged over 14 consecutive minutes and measured at peak load for the applicable engine.

$$E = (\text{Manufacturers Rated Efficiency [Continuous] at LHV}) \div (\text{HHV})$$

Where LHV = the lower heating value of the fuel

Engine efficiency shall not be less than 30 percent; an engine with efficiency lower than 30 percent shall be assigned an efficiency of 30 percent for the purposes of this Condition.

3. Equivalent or Identical Engine Replacement [Rule 324 §306]

An equivalent or identical replacement engine that replaces an existing engine shall be treated as an existing engine for the purposes of compliance with the Condition IV of this attachment unless the engine commenced operation or was constructed or modified after October 22, 2003, including the contractual obligation to undertake and complete an order for an engine and then it will be

considered a new engine in this Section.

4. Monitoring, Reporting and Recordkeeping [Rule 324 §502]
 - a. The Permittee shall keep a record that includes an initial one time entry that lists the particular engine combustion type (compression or spark-ignition or rich or lean burn); manufacturer; model designation, rated brake horsepower, serial number and where the engine is located on the site.
 - b. The Permittee shall maintain an annual record of good combustion procedures.
 - c. Exhaust System: Check for leaks and/or restrictions after 3,000 hours of operation or every year whichever occurs last.

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

Compliance with the terms of this Part shall be deemed compliance with Maricopa County Rules 324 §302, 324 §305, 324 §306 and 324 §502.

C. Particulate Matter and Opacity

1. Emission Limitations/Standards [Rule 324 §303]
 - a. 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% opacity.
 - b. The Permittee shall limit PM emissions to 0.40 g/bhp-hr for any new compression ignition engine that has a rate brake horsepower greater than 250 bhp. [Rule 324 §304 Table 3]
2. Monitoring, Reporting, and Record keeping
 - a. The Permittee shall meet all of the monitoring and recordkeeping requirements specified in Conditions III.B.2 of Attachment “D” in order to comply with Conditions IV.C.1.a of this attachment. [A.A.C R18-2-306.A.3.c]
 - b. The Permittee shall maintain copies of the manufacturer’s specifications to show compliance with Condition IV.C.1.b of this attachment. [A.A.C. R18-2-306.A.4]
3. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with Maricopa County Rule 324 §303 and 324 §304.

D. Nitrogen Oxides

1. Emission Limitations/Standards

- a. The Permittee shall comply with one of the following requirements to control NO_x emissions if the rated brake horsepower (bhp) of the existing compression ignition engine is equal to or greater than 400 bhp:
 - i. The Permittee shall limit emissions to 550 ppmdv or 7.2 g/bhp-hr;
 - ii. Employ a turbocharger with aftercooler/intercooler; or
 - iii. Employ a 4-degree injection timing retard. [Rule 324 §304 Table 1]
- b. The Permittee shall comply with one of the following requirements to control NO_x emissions if the rated brake horsepower (bhp) of the existing compression-ignition engine is less than 400 bhp and greater than or equal to 250 bhp: [Rule 324 §304 Table 1]
 - i. The Permittee shall limit emissions to 770 ppmdv or 10 g/bhp-hr;
 - ii. Employ a turbocharger with aftercooler/intercooler; or
 - iii. Employ a 4-degree injection timing retard.
- c. The Permittee shall comply with one of the following requirements to control NO_x emissions if the rated brake horsepower (bhp) of the existing spark ignition is greater than 250 bhp:
 - i. The Permittee shall limit emissions to 280 ppmdv or 4.0 g/bhp-hr; or
 - ii. Employ a three way catalyst. The three way catalyst shall provide a minimum of 80% control efficiency for NO_x for those engines fueled with natural gas, propane, or gasoline. [Rule 324 §304 Table 2]
- d. The Permittee shall comply with one of the following requirements to control NO_x emissions if the rated brake horsepower (bhp) of the new spark or compression ignition is greater than 250 bhp:
 - i. The Permittee shall limit emissions to 110 ppmdv or 1.5 g/bhp-hr if the engine is a new lean burn spark engine;
 - ii. The Permittee shall limit emissions to 20 ppmdv or 0.30 g/bhp-hr if the engine is a new rich burn spark engine; and
 - iii. The Permittee shall limit emissions to 530 ppmdv or 6.9 g/bhp-hr if the engine is a new compression ignition engine.

[Rule 324 §304 Table 3]

2. Monitoring, Recordkeeping and Testing [Rule 324 §500, 503]

For new ICEs, compliance with the limitations listed in Condition IV.D.1 above shall be demonstrated by either:

- a. A statement from the manufacturer that the engine meets the most stringent emissions standards found in 40 CFR Part 89 or 90 applicable to the engine and its model year at the time of manufacture, or
- b. Performance of emission testing using the test methods listed in Section 503 of Maricopa County Rule 324.

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

Compliance with Conditions of this Part shall be deemed compliance with Maricopa County Rules 324 §304, 324 §500 and 324 §503.

E. Carbon Monoxide

1. Emission Limitations/Standards

- a. The Permittee shall comply with one of the following requirements to control CO emissions if the rated brake horsepower (bhp) of the existing spark ignition is greater than 250 bhp: [Rule 324 §304 Table 2]

- i. The Permittee shall limit emissions to 4,500 ppm_{dv}; or
- ii. Employ a three way catalyst. The three way catalyst shall provide a minimum of 80% control efficiency for those engines fueled with natural gas, propane, or gasoline.

- b. The Permittee shall comply with one of the following requirements to control CO emissions if the rated brake horsepower (bhp) of the new spark or compression ignition is greater than 250 bhp:

[Rule 324 §304 Table 3]

- i. The Permittee shall limit emissions to 4,500 ppm_{dv} if the engine is either a new lean burn or rich burn spark engine; and
- ii. The Permittee shall limit emissions to 1,000 ppm_{dv} if the engine is a new compression ignition engine.

2. Monitoring, Recordkeeping and Testing [Rule 324 §500, 503]

For new I.C. engines, compliance with the limitations listed in Condition IV.E.1 shall be demonstrated by either:

- a. A statement from the manufacturer that the engine meets the most stringent emissions standards found in 40 CFR Part 89 or 90 applicable

to the engine and its model year at the time of manufacture; or

- b. Performance of emission testing using the test methods listed in Section 503 of Maricopa County Rule 324.

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

Compliance with conditions of this Part shall be deemed compliance with Maricopa County Rule 324 §304, 324 §500 and 324 §503.

F. Volatile Organic Compounds

- 1. Emission Limitations/Standards

The Permittee shall comply with one of the following requirements to control VOC emissions if the rated brake horsepower (bhp) of the existing spark ignition is greater than 250 bhp: [Rule 324 §304 Table 2]

- a. The Permittee shall limit emissions to 800 ppm_{mdv} or 5.0 g/bhp-hr; or
- b. Employ a three way catalyst. The three way catalyst shall also provide a minimum of at least 50% control efficiency for VOC for those engines fueled by gasoline.

- 2. Monitoring, Recordkeeping and Testing [Rule 324 §500, 503]

For new I.C. engines, compliance with the limitations listed in Condition IV.F.1 shall be demonstrated by either:

- a. A statement from the manufacturer that the engine meets the most stringent emissions standards found in 40 CFR Part 89 or 90 applicable to the engine and its model year at the time of manufacture; or
- b. Performance of emission testing using the test methods listed in Section 503 of Maricopa County Rule 324.

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

Compliance with the terms of this Part shall be deemed compliance with Maricopa County Rule 324 §304, 324 §500 and 324 §503.

V. CRUSHING AND SCREENING OPERATION

Particulate Matter

A. Emission Standards

The Permittee shall not discharge or cause to be discharged into the ambient air:

- 1. Stack emissions exceeding 7% opacity and containing more than 0.02 grains per dry standard cubic foot of particulate matter. [Rule 316 §301.1.a]

2. Fugitive dust emissions from any transfer point on a conveyer system exceeding 7% opacity. [Rule 316 §301.1.b]
3. Fugitive dust emissions exceeding 15% opacity from any crusher. [Rule 316 §301.1.c]
4. Fugitive dust emissions exceeding 10% opacity from any affected operation or process source excluding truck dumping directly into any screening operation, feed hopper or crusher. [Rule 316 §301.1.d]
5. Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any screening operation, feed hopper or crusher. [Rule 316 §303.1.e]

B. Air Pollution Control Requirements [Rule 316 §301.2]

The Permittee shall implement all of the following process controls:

1. Enclosed sides of all shaker screens
2. Permanently mount watering systems (e.g. spray bars or an equivalent control) on:
 - a. Inlet and outlet of all crushers
 - b. Outlet of all shaker screens; and
 - c. Outlet of all material transfer points, excluding wet plants.

C. Monitoring, Record Keeping, and Reporting

1. The Permittee shall meet all of the monitoring and recordkeeping requirements specified in Conditions II.C and III.C.2 of Attachment “E” in order to comply with Conditions V.C.2 below. [A.A.C R18-2-306.A.3.c]
2. The Permittee shall keep accurate daily records of: [Rule 316 §501.2.a]
 - a. hours of operation;
 - b. throughput of raw materials processed in the plant in tons/day;
 - c. amount of each raw material delivered to the plant in tons/day;
 - d. amount of water used to control fugitive dust emissions from the process equipment.

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

Compliance with the conditions of this Section shall be deemed compliance with Maricopa County Rules 316 §301.1.a, 316 §301.1.b, 316 §301.1.c, 316 §301.1.d, 316 §301.1.e, 316 §301.2 and 316 §501.2.a.

VI. CONCRETE BATCH PLANT REQUIREMENTS

Particulate Matter and Opacity

A. Emission Limitations/Standards

The Permittee shall not discharge or cause to be discharged into the ambient air:

1. Stack emissions exceeding 7% opacity. [Rule 316 §303.1.a]
2. Fugitive dust emissions exceeding 10% opacity from any affected operation or process source, excluding truck dumping directly into any screening operation, feed hopper or crusher. [Rule 316 §303.1.b]
3. Fugitive dust emissions exceeding 20% opacity from truck dumping directly into any screening operation, feed hopper, or crusher. [Rule 316 §303.1.c]

B. Air Pollution Control Requirements

1. The Permittee shall implement the following process controls:
 - a. On all cement, lime, and/or flyash storage silo(s), the Permittee shall install an operational overflow warning system/device. The system/device shall be designed to alert operator(s) to stop the loading operation when the cement, lime, and/or flyash storage silo(s) are reaching a capacity that could adversely impact pollution abatement equipment. [Rule 316 §303.2.a]
 - b. On existing cement, lime, and/or flyash silo(s), the Permittee shall install a properly sized fabric filter baghouse, with an opacity limit not greater than 5% over a 6 minute period. [Rule 316 §303.2.b]
 - c. On new cement, lime, and/or flyash silo(s) the Permittee shall install a properly sized fabric filter baghouse or equivalent device designed to meet a maximum outlet grain loading of 0.01 gr/dsf. [Rule 316 §303.2.c]
 - d. On dry mix concrete plant loading stations/truck mixed product, the Permittee shall implement one of the following process controls: [Rule 316 §303.2.d]
 - i. The Permittee shall install a rubber fill tube;
 - ii. The Permittee shall install a water spray;
 - iii. The Permittee install a properly sized fabric filter baghouse or delivery system;
 - iv. The Permittee shall have enclosed mixer stations such that no visible emissions occur; or

- v. Conduct mixer loading stations in an enclosed process building such that no visible emissions from the building occur during the mixing activities.
- e. On cement silo filling processing/loading operations controls, the Permittee shall install a pressure control system designed to shut-off cement silo filling processes/loading operations, if pressure from delivery truck is excessive, as defined in the O&M Plan. [Rule 316 §303.2.e]

C. Monitoring, Record Keeping, and Reporting

- 1. The Permittee shall meet all of the monitoring and recordkeeping requirements specified in Condition III.C of Attachment “F” in order to comply with Condition VI.A above. [A.A.C R18-2-306.A.3.c]
- 2. The Permittee shall keep accurate daily records of: [Rule 316 §501.2.a]
 - a. hours of operation;
 - b. throughput of raw materials processed in the plant in tons/day;
 - c. amount of each raw material delivered to the plant in tons/day;
 - d. amount of water used to control fugitive dust emissions from the process equipment.
- 3. For dry mix concrete plants, the Permittee shall maintain records of the following: [Rule 316 §501.2.b]
 - a. Number of bags of dry mix produced per day;
 - b. Weight (size) of bags of dry mix produced per day;
 - c. Kind and amount of fuel consumed in the dryer in cubic feet per day or gallons per day; and
 - d. Kind and amount of any back-up fuel in cubic feet per day or gallons per day.

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

Compliance with the conditions of this Section shall be deemed compliance with Maricopa County Rules 316 §303.1, 316 §303.2, 316 §303.3, 316 §501.2.a, 316 §501.2.b and 316 §501.3.

VII. FUGITIVE DUST

A. Emission and Operational Limitations

1. Opacity [Rule 316 §306.1]

The Permittee shall not discharge or cause or allow to be discharged into the ambient air fugitive dust emissions exceeding 20% opacity.

2. Visible Emission Limitation Beyond Property Line [Rule 316 §306.2]

The Permittee shall not cause or allow fugitive dust emissions from any active operation, open storage pile, or disturbed surface area associated with such facility such that the presence of such fugitive dust emissions remain visible in the atmosphere beyond the property line of such facility.

3. Wind Events

The fugitive dust emission limitations described in above sections shall not apply during a wind event, if the Permittee meets the following conditions:

- a. Has implemented the fugitive dust control measures described in Rule 316 §307 (Fugitive Dust Control Measures), as applicable;

[Rule 316 §306.3.a]

- b. Has compiled and retained records, in accordance with Section 501.4 (Dust Control Plan) of this rule, and has documented by records the occurrence of a wind event on the day(s) in question. The occurrence of a wind event must be determined by the nearest Maricopa County Environmental Services Department Air Quality Division monitoring station, from any other certified meteorological station, or by a wind instrument that is calibrated according to manufacturer's standards and that is located at the site being checked; and

[Rule 316 §306.3.b]

- c. Has implemented the following high wind fugitive dust control measures, as applicable:

[Rule 316 §306.3.c]

- i. For an active operation, implement one of the following fugitive dust control measures;

- (a) Cease active operation that may contribute to an exceedance of the fugitive dust emission limitations described in Conditions VII.A.1 and 2 above for the duration of the wind event and, if active operation is ceased for the remainder of the work day, stabilize the area; or

- (b) Maintain a visible crust by applying water or other suitable dust suppressant other than water or by implementing another fugitive dust control measure, in

sufficient quantities to meet the stabilization standards described in Section 503 and Section 504 of this rule.

- ii. For an open storage pile, implement one of the following fugitive dust control measures, in accordance with the test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules:
 - (a) Maintain a visible crust by applying water or other suitable dust suppressant other than water or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 503 and Section 504 of this rule.
 - (b) Cover open storage pile with tarps, plastic, or other material such that wind will not remove the covering, if open storage pile is less than eight feet high.
- iii. For a disturbed surface area, implement one of the following fugitive dust control measures, in accordance with the test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules:
 - (a) Uniformly apply and maintain surface gravel or a dust suppressant other than water; or
 - (b) Maintain a visible crust by applying water or other suitable dust suppressant other than water or by implementing another fugitive dust control measure, in sufficient quantities to meet the stabilization standards described in Section 503 and Section 504 of this rule.

4 Silt Loading and Silt Content Standards [Rule 316 §306.4]

From unpaved internal roads and unpaved parking and staging areas, the Permittee shall not discharge or allow to be discharged into the ambient air fugitive dust emissions exceeding 20% opacity, in accordance with the test methods described in Section 502 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules, and one of the following:

- a. Silt loading equal to or greater than 0.33 oz/ft²; or
- b. Silt content exceeding 6%.

5. Stabilization Standards [Rule 316 §306.5.a & b]

- a. The Permittee shall be considered in violation of this rule if any open storage pile and material handling or surface soils where support equipment and vehicles operate in association with such facility is not maintained in a manner that meets at least one of the standards listed below, as applicable.

- i. Maintain a visible crust;
 - ii. Maintain a threshold friction velocity (TFV) for disturbed surface areas corrected for non-erodible elements of 100 cm/second or higher;
 - iii. Maintain a flat vegetative cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%;
 - iv. Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%;
 - v. Maintain a standing vegetative cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements;
 - vi. Maintain a percent cover that is equal to or greater than 10% for non-erodible elements; or
 - vii. Comply with a standard of an alternative test method, upon obtaining the written approval from the Control Officer and the Administrator of the Environmental Protection Agency (EPA).
- b. If no activity is occurring on an open storage pile and material handling or surface soils where support equipment and vehicles operate in association with such facility and if an open storage pile and material handling or surface soils where support equipment and vehicles operate in association with such facility contain more than one type of disturbance, soil, vegetation, or other characteristics, which are visibly distinguishable, each representative surface shall be tested separately for stability, in an area that represents a random portion of the overall disturbed conditions of the site, in accordance with the appropriate test methods described in Section 503 and Section 504 of this rule and in Appendix C (Fugitive Dust Test Methods) of these rules and shall be included in or eliminated from the total size assessment of disturbed surface area(s) depending upon test method results.

B. Air Pollution Control Requirements

The Permittee shall implement the fugitive dust control measures described in this Section. Any fugitive dust control measure that is implemented must achieve the applicable standard(s) described Condition VII.A of this Attachment, as determined by the corresponding test method(s), as applicable, and must achieve other applicable standard(s) set forth in this rule.

The Permittee may submit a request to the Control Officer and the Administrator of the Environmental Protection Agency (EPA) for the use of alternative control measure(s). The request shall include the proposed alternative control measure, the control measure that the alternative would replace, and a detailed statement or report demonstrating that the measure would result in equivalent or better emission control than the measures prescribed in this rule. [Rule 316 §307]

1. Open Storage Piles and Material Handling

The Permittee shall implement all of the following fugitive dust control measures, as applicable, in compliance with Conditions VII.A.1 through VII.A.5 of this Attachment. Open storage pile(s) and material handling does not include berms and guard rails that are installed to comply with 30 CFR 56.93000. However, such berms and guard rails shall be installed and maintained in compliance with Condition VII.A.1 and Condition VII.A.5 of this Attachment. [Rule 316 §307.1]

a. Prior to, and/or while conducting stacking, loading, and unloading operations, implement one of the following fugitive dust control measures: [Rule 316 §307.1.a]

- i. Spray material with water, as necessary; or
- ii. Spray material with a dust suppressant other than water, as necessary.

b. When not conducting stacking, loading, and unloading operation implement one of the following fugitive dust control measures: [Rule 316 §307.1.b]

- i. Spray material with water, as necessary, in compliance with Conditions VII.A.1 and VII.A.5 of this Attachment;
- ii. Maintain a 1.5% or more soil moisture content of the open storage pile(s), in compliance with Conditions VII.A.1 and VII.A.5 of this Attachment.
- iii. Locate open storage pile(s) in a pit/in the bottom of a pit. If implementing this fugitive dust control measure, the owner and/or operator of a facility shall also comply with the stabilization standards in Condition VII.A.5 of this Attachment;
- iv. Arrange open storage pile(s) such that storage pile(s) of larger diameter products are on the perimeter and act as barriers to/for open storage pile(s) that could create fugitive dust emissions. If implementing this fugitive dust control measure, the owner and/or operator of a facility shall also comply with the stabilization standards in Condition VII.A.5 of this Attachment;
- v. Meet one of the stabilization standards in Condition VII.A.5 of this Attachment; or

- vi. Construct and maintain wind barriers, storage silos, or a three-sided enclosure with walls, whose length is no less than equal to the length of the pile, whose distance from the pile is no more than twice the height of the pile, whose height is equal to the pile height, and whose porosity is no more than 50%. If implementing this fugitive dust control measure, the owner and/or operator of a facility shall also comply with the stabilization standards in Condition VII.A.5 of this Attachment.
- c. When installing new open storage pile(s) at an existing facility and/or when installing new open storage pile(s) at a new facility, the Permittee shall implement all of the following fugitive dust control measures in compliance with Conditions VII.A.1 and VII.A.5 of this Attachment; only if it is determined to be feasible on a case-by-case basis through the Dust Control Plan by assessing the amount of open land available at the property at the time the new open storage pile(s) are formed:
 - [Rule 316 §307.1.c]
 - i. Install the open storage pile(s) at least 25 feet from the property line; and
 - ii. Limit the height of the open storage pile(s) to less than 45 feet.
- d. For existing open storage pile(s) and when installing open storage pile(s) for an existing facility or for a new facility, if such open storage pile(s) will be constructed over eight feet high and will not be covered, then the Permittee shall install, use, and maintain a water truck or other method that is capable of completely wetting the surfaces of open storage pile(s) in compliance Conditions VII.A.1 and VII.A.5 of this Attachment.
 - [Rule 316 §307.1.d]

2. Surface Stabilization Where Support Equipment and Vehicles Operate

The owner and/or operator of a facility shall stabilize surface soils where loaders, support equipment, and vehicles will operate by implementing one of the following fugitive dust control measures, in compliance with Condition VII.A.4 and/or Condition VII.A.5 of this Attachment, as applicable:

- a. Pre-water surface soils;
- b. Apply and maintain a dust suppressant, other than water; or
- c. Apply a gravel pad, in compliance with the Condition VII.B.6.b.iv of this Attachment.
 - [Rule 316 §307.2]

3. Haul/Access Roads

- a. The Permittee shall implement one of the following fugitive dust control measures, as applicable, in compliance with Condition VII.A.4 of this Attachment, before engaging in the use of, or in the maintenance of, haul/access roads. Compliance with the provisions of this section of this

rule shall not relieve any person subject to the requirements of this section of this rule from complying with any other federally enforceable requirements (i.e., a permit issued under Section 404 of the Clean Water Act). [Rule 316 §307.3.a]

- i. Install and maintain bumps, humps, or dips for speed control and apply water, as necessary;
 - ii. Limit vehicle speeds and apply water, as necessary;
 - iii. Pave;
 - iv. Apply and maintain a gravel pad in compliance with Section Condition VII.B.6.b.iv of this Attachment;
 - v. Apply a dust suppressant, other than water; or
 - vi. Install and maintain a cohesive hard surface.
- b. For a new facility, if implementing one of the fugitive dust control measures described in Condition VII.B.3.a of this Attachment is determined to be technically infeasible as obtained/approved in writing by the Control Officer and the Administrator of the Environmental Protection Agency (EPA) and as approved in the Dust Control Plan, then the owner and/or operator of a new facility shall maintain a minimum distance of 25 feet from the property line for haul/access roads associated with the new facility. [Rule 316 §307.3.b]

4. On-Site Traffic

- a. The Permittee shall require all batch trucks and material delivery trucks to remain on internal roads with paved surfaces or cohesive hard surfaces in the permanent areas of the facility/operation that include entrances, exits, warehouses and maintenance areas, office areas, concrete plant areas, asphaltic plant areas, and parking and staging areas, as approved in the Dust Control Plan. [Rule 316 §307.4.a]
- b. The Permittee shall require all aggregate trucks to remain on internal roads subject to Condition VII.B.4.a above, when entering and exiting aggregate loading areas/loading operations, as approved in the Dust Control Plan. [Rule 316 §307.4.b]
- c. The Permittee shall require all batch trucks and material delivery trucks to enter and exit the facility/operation only through entrances that comply with the trackout requirements in Condition VII.A.5 of this Attachment, and that comply with Condition VII.B.5 of this Attachment. [Rule 316 §307.4.c]

5. Off-Site Traffic [Rule 316 §307.5]

When hauling and/or transporting bulk material off-site, the Permittee shall implement all of the following control measures:

- a. Load all haul trucks such that the freeboard is not less than three inches;
- b. Prevent spillage or loss of bulk material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate(s); and
- c. Cover haul trucks with a tarp or other suitable closure.

6. Trackout

a. Rumble Grate and Wheel Washer: [Rule 316 §307.6.a]

The Permittee of a new permanent facility and the Permittee of an existing permanent facility with a minimum of 60 aggregate trucks, mixer trucks, and/or batch trucks exiting a facility on any day onto paved public roadways/paved areas accessible to the public shall install, maintain, and use a rumble grate and wheel washer, in accordance with all of the following conditions, as applicable. For the purpose of this rule, a vehicle wash and/or a cosmetic wash may be substituted for a wheel washer, provided such vehicle wash and/or cosmetic wash has at least 40 pounds per square inch (psi) water spray from the nozzle (the Permittee of the facility shall have a water pressure gauge available on-site to allow verification of such water pressure), meets the definition of wheel washer (i.e., is capable of washing the entire circumference of each wheel of the vehicle), is operated in such a way that visible deposits are removed from the entire circumference of each wheel of the vehicle exiting the wash, is installed, maintained, and used in accordance with criteria listed below, and is approved in the Dust Control Plan for the facility.

- i. The Permittee shall locate a rumble grate within 10 feet from a wheel washer. The rumble grate and wheel washer shall be located no less than 30 feet prior to each exit that leads to a paved public roadway/paved area accessible to the public and that is used by aggregate trucks, mixer trucks, and/or batch trucks.
- ii. The Permittee shall ensure that all aggregate trucks, mixer trucks, and/or batch trucks exit the facility via the rumble grate first and then the wheel washer.
- iii. The Permittee shall post a sign by the rumble grate and wheel washer to designate the speed limit as 5 miles per hour.
- iv. The Permittee shall pave the internal roads from the rumble grate and wheel washer to the facility exits leading to paved public roadways/paved areas accessible to the public.

- v. The Permittee shall ensure that all aggregate trucks, mixer trucks, and/or batch trucks remain on the paved internal roads between the rumble grate and wheel washer and the facility exits leading to paved public roadways/paved areas accessible to the public.

- b. Rumble Grate, Wheel Washer, or Truck Washer: [Rule 316 §307.6.b]

The Permittee not subject to Condition VII.B.6.a of this Attachment shall install, maintain, and use a rumble grate, wheel washer, or truck washer in accordance with all of the following:

- i. A rumble grate, wheel washer, or truck washer shall be located no less than 30 feet prior to each exit that leads to a paved public roadway/paved area accessible to the public and that is used by aggregate trucks, mixer trucks, and/or batch trucks. The Permittee may be allowed to install a rumble grate, wheel washer, or truck washer less than 30 feet prior to each exit.
- ii. The Permittee shall ensure that all aggregate trucks, mixer trucks, and/or batch trucks exit the facility via a rumble grate, wheel washer, or truck washer.
- iii. The Permittee shall post a sign by the rumble grate, wheel washer, or truck washer to designate the speed limit as 5 miles per hour.
- iv. If haul/access roads/internal roads are unpaved between the rumble grate, wheel washer, or truck washer and the facility exits leading to paved public roadways/paved areas accessible to the public, a gravel pad shall be installed, maintained, and used from the rumble grate, wheel washer, or truck washer to such paved public roadways/paved areas accessible to the public in accordance with all of the following:
 - (a) Gravel pad shall be designed with a layer of washed gravel, rock, or crushed rock that is at least one inch or larger in diameter and 6 inches deep, 30 feet wide, and 50 feet long and shall be flushed with water or completely replaced as necessary to comply with the trackout threshold described in Condition VII.B.6.d of this Attachment.
 - (b) Gravel pad shall have a gravel pad stabilizing mechanism/device (i.e., curbs or structural devices along the perimeter of the gravel pad) and shall be flushed with water or completely replaced as necessary to comply with the trackout threshold described in Condition VII.B.6.d of this Attachment.

c. Exemptions for Wheel Washers: [Rule 316 §307.6.c]

The Permittee shall not be required to install, maintain, and use a wheel washer, if any one of the following is applicable:

- i. A facility has all paved internal roads and meters aggregate or related materials directly to a ready-mix or hot mix asphalt truck, with the exception of returned products. The owner and/or operator of the facility shall install, maintain, and use a rumble grate in compliance with Condition VII.B.6.b of this Attachment.
- ii. A facility is less than 5 acres in land size and handles recycled asphalt and recycled concrete exclusively. The owner and/or operator of the facility shall install, maintain, and use a rumble grate in compliance with Condition VII.B.6.b and shall install a gravel pad in compliance with Condition VII.B.6.b.iv of this Attachment on all unpaved internal roads leading to the facility exits leading to paved public roadways/paved areas accessible to the public.
- iii. A facility has a minimum of ¼ mile paved internal roads leading from a rumble grate to the facility exits leading to paved public roadways/paved areas accessible to the public.
- iv. If the facility meets the definition of infrequent operations, then the Permittee shall:
 - (a) Install, maintain, and use a rumble grate in compliance with Condition VII.B.6.b of this Attachment, and shall install a gravel pad in compliance with Condition VII.B.6.b.4 of this Attachment. The gravel pad shall be installed for a distance of no less than 100 feet from the rumble grate to the facility exits leading to paved public roadways/paved areas accessible to the public.
 - (b) Keep records in accordance with VII.B of this Attachment, as applicable.
 - (c) Notify the Director in the event that the facility will operate more than 52 days per year based on the average rolling 3-year period after June 8, 2005 and the Permittee shall comply with Condition VII.B.6, as applicable.

d. Trackout Distance: [Rule 316 §307.6.d]

An owner and/or operator of a facility shall not allow trackout to extend a cumulative distance of 25 linear feet or more from all facility exits onto paved areas accessible to the public. Notwithstanding the proceeding, The Permittee shall clean up all other trackout at the end of the workday.

e. Cleaning Paved Internal Roads: [Rule 316 §307.6.e]

The Permittee shall clean all paved internal roads in accordance with all of the following as applicable:

- i. The Permittee with a minimum of 60 aggregate trucks, mixer trucks, and/or batch trucks exiting the facility on any day shall sweep the paved internal roads with a street sweeper by the end of each production work shift, if there is evidence of dirt and/or other bulk material extending a cumulative distance of 12 linear feet or more on any paved internal road.
- ii. The Permittee with less than 60 aggregate trucks, mixer trucks, and/or batch trucks exiting the facility on any day shall sweep the paved internal roads with a street sweeper by the end of every other work day. On the days that paved internal roads are not swept, The Permittee shall apply water as necessary to comply with Condition VII.A of this Attachment, on at least 100 feet of paved internal roads or the entire length of paved internal roads leading to an exit to paved public roadways/paved areas accessible to the public, if such roadways are less than 100 feet long.
- iii. The Permittee, who purchases street sweepers after June 8, 2005, shall purchase street sweepers that meet the criteria of PM₁₀ efficient South Coast Air Quality Management Rule 1186 certified street sweepers.
- iv. The Permittee shall use South Coast Air Quality Management Rule 1186 certified street sweepers to sweep paved internal roads.

7. Pad Construction for Processing Equipment [Rule 316 §307.7]

The Permittee shall implement, maintain, and use fugitive dust control measures during the construction of pads for processing equipment and shall identify, in the Dust Control Plan, such fugitive dust control measures.

8. Spillage [Rule 316 §307.8]

In addition to complying with the fugitive dust emission limitations described in Condition VII.A of this Attachment and implementing fugitive dust control measures described in Condition VII.B.1 through Condition VII.B.9 of this Attachment, as applicable, The Permittee shall implement one of the following fugitive dust control measures, as applicable, when spillage occurs:

- a. Promptly remove any pile of spillage on paved haul/access roads/paved internal roads;
- b. Maintain in a stabilized condition any pile of spillage on paved

haul/access roads/paved internal roads and remove such pile by the end of each day; or

- c. Maintain in a stabilized condition all other piles of spillage with dust suppressants until removal.

9. Night-Time Operations [Rule 316 §307.9]

The Permittee shall implement, maintain, and use fugitive dust control measures at night, as approved in the Dust Control Plan.

C. Monitoring, Recordkeeping, and Reporting

1. Fugitive Dust Control Technician [Rule 316 §308]

The Permittee with a rated or permitted capacity of 25 tons or more of material per hour shall have in place a Fugitive Dust Control Technician or his designee, who shall meet all of the following qualifications:

- a. Be authorized by the owner and/or operator of the facility to conduct routine inspections, recordkeeping, and reporting to ensure that all fugitive dust control measures are installed, maintained, and used in compliance with this rule.
- b. Be authorized by the owner and/or operator of the facility to install, maintain, and use fugitive dust control measures, deploy resources, and shutdown or modify activities as needed.
- c. Be available within 30 minutes.
- d. Be issued a valid Certificate of Completion of the Maricopa County Fugitive Dust Control Class.
- e. Be certified to determine opacity as visible emissions in accordance with the provisions of the EPA Method 9 as specified in 40 CFR, Part 60, Appendix A.

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

- a. A certified Method 9 observer shall conduct a monthly visual survey of visible emissions from the fugitive sources. The Permittee shall keep records of the name of observer, date, time, and result of the survey and observation.
- b. If the observer sees a plume from a fugitive source that on an instantaneous basis appears to exceed 20%, then the observer shall, if practicable, take a six-minute Method 9 observation of the plume.
- c. If the six-minute opacity of the plume is less than 20%, the observer shall make a record of the following:

- i. Location, date, and time of the observation; and
 - ii. The results of the Method 9 observation.
- d. If the six-minute opacity of the plume exceeds 20%, then the Permittee shall do the following:
- i. Adjust or repair the controls or equipment to reduce opacity to below 20%; and
 - ii. Report it as an excess emission under Section XI.A of Attachment "A".

3. Dust Control Plan

The Permittee shall submit, to the Control Officer, a Dust Control Plan that describes all fugitive dust control measures to be implemented, in order to comply with Conditions VII.A and VII.B of this Attachment. The Dust Control Plan shall, at a minimum, contain all the information described in Rule 310 (Fugitive Dust) of these rules. [Rule 316 §309]

4. Dust Control Plan Records [Rule 316 §501.4]

An owner and/or operator of a facility shall compile, maintain, and retain records as described in Rule 310 (Fugitive Dust) of these rules. [Rule 316 §501.4]

D. Testing Requirements

- 1. The Permittee shall conduct performance tests for soil stabilization and moisture content as required by the Director.
- 2. The stabilization standards described in Condition VII.A.5 of this Attachment shall be determined by using the following test methods in accordance with Appendix C (Fugitive Dust Test Methods) of the Maricopa County Rules:
 - a. Soil Moisture Content and Soil Compaction Characteristic Test Methods [Rule 316 §503]
 - i. ASTM Method D2216-98 ("Standard Test Method For Laboratory Determination Of Water (Moisture) Content Of Soil And Rock By Mass"), 1998 edition
 - ii. ASTM Method D1557-91 (1998) ("Test Method For Laboratory Compaction Characteristics Of Soil
 - b. Stabilization Standards Test Methods [Rule 316 §504]
 - i. Appendix C, Section 2.1.1 (Silt Content Test Method) of these rules to estimate the silt content of the trafficked parts of unpaved roads and unpaved parking lots.

- ii. Appendix C, Section 2.3 (Test Methods for Stabilization-Visible Crust Determination) (The Drop Ball/Steel Ball Test) of these rules for a visible crust.
- iii. Appendix C, Section 2.4 (Test Methods for Stabilization-Determination of Threshold Friction Velocity (TFV)) (Sieving Field Procedure) of these rules for threshold friction velocity (TFV) corrected for non-erodible elements of 100 cm/second or higher.
- iv. Appendix C, Section 2.5 (Test Methods for Stabilization-Determination of Flat Vegetative Cover) of these rules for flat vegetation cover (i.e., attached (rooted) vegetation or unattached vegetative debris lying on the surface with a predominant horizontal orientation that is not subject to movement by wind) that is equal to at least 50%.
- v. Appendix C, Section 2.6 (Test Methods for Stabilization-Determination of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 30%.
- vi. Appendix C, Section 2.6 (Test Methods for Stabilization-Determination of Standing Vegetative Cover) of these rules for standing vegetation cover (i.e., vegetation that is attached (rooted) with a predominant vertical orientation) that is equal to or greater than 10% and where the threshold friction velocity is equal to or greater than 43 cm/second when corrected for non-erodible elements.
- vii. Appendix C, Section 2.7 (Test Methods for Stabilization-Rock Test Method) of these rules for a percent cover that is equal to or greater than 10%, for non-erodible elements.
- viii. An alternative test method approved in writing by the Director and the Administrator of the EPA.

E. Permit Shield

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

Compliance with Conditions of this Section shall be deemed compliance with Maricopa County Rules 316 §306.1, 316 §306.2, 316 §306.3, 316 §306.4, 316 §306.5, 316 §307.1, 316 §307.2., 316 §307.3, 316 §307.4, 316 §307.5 316 §307.6, 316 §307.7, 316 §307.8, 316 §307.9, 316 §308, 316 §501.4, 316 §503 and 316 §504.

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**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

**ATTACHMENT "H"
ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN PIMA COUNTY**

I. APPLICABILITY

While operating in Pima County the Permittee shall also comply with the Conditions set forth in Attachments "A", "B", "C", "D", "E" and "F". Whenever more than one Condition in this Attachment regulating the same emissions applies to any emissions unit, or whenever a Condition in this Attachment "H" and a Condition in Attachments "A", "B", "C", "D", "E" and "F" 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.

II. HOT MIX ASPHALT PLANT REQUIREMENTS [P.C.C. §§ 17.16.210]

A. Particulate Matter (PM) Emissions [P.C.C. §§ 17.16.210.B-D]

1. The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere from the hot mix asphalt plant, in any one hour, total quantities in excess of the amounts calculated by one of the following equations:

a. For facilities having a process weight rate of sixty thousand pounds per hour (thirty tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

where:

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

P = the process weight rate in tons mass per hour

b. For facilities having a process weight rate greater than sixty thousand pounds per hour (thirty tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 17.31P^{0.16}$$

where:

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

P = the process weight rate in tons mass per hour

2. The actual values shall be calculated from the applicable equations and rounded off to two decimal places.
3. The total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.
4. Permit Shield [A.A.C. R18-2-325]

Compliance with Conditions of this Part shall be deemed compliance with P.C.C. §§ 17.16.210.B-D.

III. CRUSHING AND SCREENING FACILITY REQUIREMENTS

A. Applicability

1. The provisions of this Section are applicable to the following affected facilities: primary rock crushers, secondary rock crushers, tertiary rock crushers, screens, conveyors and conveyor transfer points, stackers, reclaimers, and all gravel or crushed stone processing plants and rock storage piles. [P.C.C. §§ 17.16.370.A]
2. Fugitive emissions from gravel or crushed stone processing plants shall be controlled in accordance Condition V of this Attachment. [P.C.C. §§ 17.16.370.E]
3. Permit Shield [P.C.C. §§ 17.12.310.A]

Compliance with Conditions of this Part shall be deemed compliance with P.C.C. §§ 17.16.370.A and P.C.C. §§ 17.16.370.E.

B. Particulate Matter and Opacity

1. Emission Limitations and Standards
 - a. Permittee shall not allow or permit the discharge of particulate matter into the atmosphere except as fugitive emissions in any one hour from any gravel or crushed stone processing plant in total quantities in excess of the amounts calculated by one of the following equations:
 - i. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation: [P.C.C. §§ 17.16.370.B.1]

$$E = 3.59 P^{0.62}$$

where:

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

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

- ii. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation: [P.C.C. §§ 17.16.370.B.2]

$$E = 17.31 P^{0.16}$$

where "E" and "P" are defined as above

- iii. The actual values shall be calculated from the applicable equations and rounded off to two decimal places. [P.C.C. §§ 17.16.370.C]

- b. The opacity of any plume or effluent shall not be greater than the opacity limit for "Other Sources" in Table 4 of Condition VI. [P.C.C §§ 17.16.710]

2. Monitoring and Recordkeeping

- a. The Permittee shall maintain a record of daily production rates of gravel or crushed stone produced. [P.C.C. §§ 17.16.370.G]
- b. The Permittee shall meet all of the monitoring and recordkeeping requirements specified in Conditions II.C, III.C.2 and IV.B.3 of Attachment "E" in order to comply with Conditions III.B.1.b of this Attachment. [A.A.C R18-2-306.A.3.e]

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

Compliance with Conditions of this Part shall be deemed compliance with P.C.C. §§ 17.16.370 and P.C.C. §§ 17.16.710.

IV. CONCRETE BATCH PLANTS

A. Emission Limitations [P.C.C. §§ 17.16.380]

Fugitive emissions from concrete batch plants shall be controlled in accordance Condition V of this Attachment.

B. Permit Shield [P.C.C. §§ 17.12.310.A]

Compliance with Conditions of this Section shall be deemed compliance with P.C.C. §§ 17.16.380.

V. FUGITIVE EMISSIONS REQUIREMENTS

A. Fugitive Dust Producing Activities [P.C.C. §§ 17.16.060]

- 1. The Permittee shall control windblown dust, dust from haul roads, and dust emitted from land clearing, earthmoving, demolition, trenching, blasting, road construction, mining, racing event, and other activities, as applicable.

2. Until the area becomes permanently stabilized by paving, landscaping or otherwise, dust emissions shall be controlled by applying adequate amounts of water, chemical stabilizer, or other effective dust suppressant.
3. The Permittee shall not leave land in such a state that fugitive dust emissions (including windblown dust or dust caused by vehicular traffic on the area) would violate this permit. (Ord. 1994-83 § 50, 1994; Ord. 1993-128 § 4, 1993; Ord. 1979-93 (part), 1979)

B. Vacant Lots and Open Spaces

[P.C.C. §§ 17.16.080]

1. The Permittee shall minimize dust emissions from the construction, use, alteration, repair, demolition, clearing, leveling, or excavation of any vacant lot, parking area, housing plot, building site, sales lot, playground, livestock feedlot, or other open area, other than those solely used for soil-cultivation or vegetative crop-producing and harvesting agricultural purposes, by intermittently applying water or other effective dust suppressants to the area, paving, detouring, barring access, or other equivalently effective controls.
2. No vacant lot, housing plot, building site, parking area, sales lot, playground, livestock feedlot, or other open area - other than those used solely for soil-cultivation or vegetative crop-producing and harvesting agricultural purposes - shall be left in such a state after construction, alteration, clearing, leveling, or excavation that naturally induced wind blowing over the area causes visible emissions of airborne dust to diffuse beyond the property lines within which the emissions become airborne. Dust emissions must be permanently suppressed by landscaping, covering with gravel or vegetation, paving, or applying equivalently effective controls.
3. This Section shall not apply when wind speeds exceed twenty-five miles per hour (as recorded by the National Weather Service or as estimated by an enforcement officer using the Beaufort Scale of Wind Speed Equivalents) unless control measures have not been taken or were not commensurate with the size or scope of the sources of dust.

C. Roads and Streets

[P.C.C. §§ 17.16.090]

1. Dust emissions from the construction phase of a new road must be minimized by applying the same measures specified in Condition V.A above.
2. No new unpaved private driveway shall be constructed unless the road will not be used by more vehicular traffic than that associated with a one - or two-family private residence, and the road will not be adjacent to any recreational, institutional, educational, or retail sales facility.
3. No new unpaved service road or unpaved haul road shall be constructed unless dust will be suppressed after construction by intermittently watering, limiting access, or applying chemical dust suppressants to the road, in such a way that visible dust emissions caused by vehicular traffic on the road do not violate section 17.16.050.

4. No new road other than a private driveway shall be constructed unless the paving specifications are those defined by, or equivalent to those of, the planning department and/or highway department of the jurisdictional agency.
5. The surfacing of roadways with asbestos tailings is prohibited.

D. Particulate Materials [P.C.C. §§ 17.16.100]

1. No person shall cause, suffer, allow or permit crushing, screening, handling, transporting or conveying of materials or other operations likely to result in significant amounts of airborne dust without taking reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent excessive amounts of particulate matter from becoming airborne.
2. Dust emissions from construction activity shall be effectively controlled by applying adequate amounts of water or other equivalently effective dust controls.
3. Dust emissions from the transportation of materials shall be effectively controlled by covering stock loads in open-bodied trucks, limiting vehicular speeds, or other equivalently effective controls.
4. Emissions from a sandblasting or other abrasive blasting operation shall be effectively controlled by applying water to suppress visible emissions (wet blasting), enclosing the operation, or use of other equivalently effective controls.

E. Fugitive dust emissions standards for motor vehicle operation [P.C.C. §§ 17.16.070]

1. No person shall cause, suffer, allow, or permit a vacant lot, or an urban or suburban open area, to be driven over or used by motor vehicles, trucks, cars, cycles, bikes, or buggies, or by animals such as horses, without taking reasonable precautions to limit excessive amounts of particulates from becoming airborne. Dust shall be kept to a minimum 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.
2. No person shall operate a motor vehicle for recreational purposes in a dry wash, riverbed or open area in such a way as to cause or contribute to excessive amounts of particulate matter from becoming airborne into a residential, recreational, institutional educational, retail sales, hotel or business premises.
3. Any person found to be in violation of this section shall be guilty of an offense as provided under A.R.S. 49-502.
4. In accordance with the provisions of A.R.S. 49-502, peace officers are authorized to issue a notice to appear for any violation of this section. In lieu of issuing a notice to appear, peace officers may file a violation report with the control officer, requesting him to file a complaint alleging a violation of this section pursuant to A.R.S. 49-502. (Ord. 1995-87 § 42, 1995: Ord. 1993-128 § 4 (part), 1993)

F. Storage Piles [P.C.C. §§ 17.16.110]

1. No person shall cause, suffer, allow, or permit organic or inorganic dust producing material to be stacked, piled or otherwise stored without taking reasonable precautions such as chemical stabilization, wetting, or covering to prevent excessive amounts of particulate matter from becoming airborne.
2. Stacking and reclaiming machinery utilized at storage piles shall be operated at all times with a minimum fall of material and in such manner, or with the use of spray bars and wetting agents, as to minimize and control to ensure compliance with Section 17.16.050. (Ord. 1993-128 § 4 (part), 1993)

G. Mineral tailings. [P.C.C. §§ 17.16.120]

1. No person shall cause, suffer, allow, or permit construction of mineral tailing piles without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, revegetation or such other measures as are approved by the control officer.
2. No person shall cause, suffer, allow, or permit construction of mineral tailings piles without taking reasonable precautions (i.e., wetting, chemical stabilization and revegetation) to minimize and control to ensure compliance with Section 17.16.050. (Ord. 1995-87 § 46, 1995: Ord. 1993-128 § 4 (part), 1993)

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

Compliance with Conditions of this Part shall be deemed compliance with P.C.C. §§ 17.16.060, P.C.C. §§ 17.16.070, P.C.C. §§ 17.16.080, P.C.C. §§ 17.16.090, P.C.C. §§ 17.16.100, P.C.C. §§ 17.16.110, and P.C.C. §§ 17.16.120.

VI. OTHER SPECIFIC REQUIREMENTS

A. Fuel Requirements [P.C.C. §§ 17.16.010.C]

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.

B. Opacity Limitations

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 4. 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.
- c. The use of air or other gaseous diluents solely for the purpose of achieving compliance with an opacity standard is prohibited.
- d. 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. 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]

- a. 20 percent for such non-point sources in Eastern Pima County, east of the eastern boundary of the Tohono O'Odham Reservations.
- b. 40 percent for such non-point sources in all other areas of Pima County.

C. Visibility Limiting Standard

[P.C.C. §§ 17.16.050]

- 1. The Permittee shall not cause, suffer, 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.
- 2. Opacity of an emission from any non-point source shall not be greater than 40 percent measured in accordance with the Arizona Testing Manual, Reference Method 9.
- 3. Open fires permitted according to Chapter 17.12 of the Pima County Regulations are exempt from the requirements of this Section.
- 4. The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken.

- a. Sources required to obtain an air quality permit under ARS § 49-426, § 49-480 or Rule 17.12.470 of the Pima County Regulations may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions.
 - b. Condition VI.B of this Attachment shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source.
5. Condition VI.B of this Attachment shall not apply to the generation of airborne particulate matter from undisturbed land.

TABLE 4: EMISSIONS-DISCHARGE OPACITY LIMITING STANDARDS

Type of Source	Instantaneous Opacity Measurements			Maximum Allowable Average Opacity, %
	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.

(Ord. 1993-128 4, 1993; Ord. 1979-93 (part), 1979)

D. Permit Shield

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

Compliance with Conditions of this Section shall be deemed compliance with P.C.C. §§ 17.16.010.C, P.C.C. § 17.16.040, and P.C.C. §§ 17.16.050.

**GENERAL AIR QUALITY CONTROL PERMIT FOR
HOT MIX ASPHALT PLANTS**

**ATTACHMENT "I"
ADDITIONAL REQUIREMENTS FOR SOURCES OPERATING IN PINAL COUNTY**

I. APPLICABILITY

While operation in Pinal County the Permittee shall also comply with the Conditions set forth in Attachments "A", "B", "C", "D", "E" and "F". Whenever more than one Condition in this Attachment regulating the same emissions applies to any emissions unit, or whenever a Condition in this Attachment "I" and a Condition in Attachment "A", "B", "C", "D", "E" and "F" 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.

II. FACILITY WIDE REQUIREMENTS

Air Pollution Control Requirements

- A. Material Containment Required** [Pinal Code § 5-24-1030.F]

Materials including, but not limited to solvents or other volatile compounds, paints, acids, alkalis, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

- B. Stack Requirements** [Pinal Code § 5-24-1030.G]

Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

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

Compliance with Conditions of this Part shall be deemed compliance with Pinal Code § 5-2-050, §5-5-190, 5-24-1030.F and § 5-24-1030.G.