CLASS I AIR QUALITY PERMIT

DRAFT PERMIT No. 110665

PERMITTEE: **CalPortland Company**
FACILITY: **CalPortland – Rillito Cement Plant**
PLACE ID: **2869**
DATE ISSUED: **Date Pending**
EXPIRY DATE: **Date Pending**

SUMMARY

This Class I air quality renewal permit is issued to CalPortland Company, the Permittee, for the continued operation of a portland cement plant known as the Rillito Cement Plant. The facility is located at 11115 N. Casa Grande Highway, Rillito, AZ 85654. This permit renews and supersedes Permit No. 61522.

The Rillito Cement Plant is comprised of a portland cement plant, a limestone quarry, the Twin Peaks Rock and Stone Aggregate Plant, the Cotton Field Primary and Overland Plant, and other supporting operations. The Rillito Cement Plant produces portland cement as the primary product with aggregate and concrete as secondary products. The nominal design rate for Kiln 4 is 207 tons per hour (tph) of clinker and 264 tph facility-wide or all four kilns combined. The facility operates continuously for 24 hours per day and 365 days per year.

The facility has the potential to emit particulate matter (PM), particulate matter less than 10 microns (PM_{10}), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur dioxide (SO_2) and hazardous air pollutants (HAPs) greater than the major source thresholds. Thus, the facility is classified as a major source as defined in the Arizona Administrative Code (A.A.C.) R18-2-101(76), and requires a Class I permit in accordance with A.A.C. R18-2-302.B.1.a.

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

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ATTACHMENT "A": GENERAL PROVISIONS

I. PERMIT EXPIRATION AND RENEWAL

A. This permit is valid for a period of five (5) years from the date of issuance.

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

B. The Permittee shall submit an application for renewal of this permit at least six (6) months, but not more than eighteen (18) months, prior to the date of permit expiration.

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

II. COMPLIANCE WITH PERMIT CONDITIONS

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona Revised Statutes (A.R.S.) Title 49, Chapter 3, and the air quality rules under Title 18, Chapter 2 of the Arizona Administrative Code. Any permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

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

B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

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

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

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Clean Air Act become applicable to the Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of it terms and conditions has been extended pursuant to A.A.C. R18-2-322.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in A.A.C. R18-2-322 for permit renewal and shall reset the five-year permit term;

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[A.A.C. R18-2-321.A.1.a]

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit;

[A.A.C. R18-2-321.A.1.b]

3. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; and

[A.A.C. R18-2-321.A.1.c]

4. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

[A.A.C. R18-2-321.A.1.d]

C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall, except for reopenings under Condition III.B.1 above, affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in Condition III.B.1 above shall not result in a resetting of the five-year permit term.

[A.A.C. R18-2-321.A.2]

IV. POSTING OF PERMIT

A. The Permittee shall post this permit or a certificate of permit issuance at the facility in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:

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

1. Current permit number; or

2. Serial number or other equipment identification number (equipment ID number) that is also listed in the permit to identify that piece of equipment.

B. A copy of the complete permit shall be kept on site.

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

V. FEE PAYMENT

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

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

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 31st or ninety (90) days

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after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.

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

B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.B.

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

VII. COMPLIANCE CERTIFICATION

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

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

B. The compliance certifications shall include the following:

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

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

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

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

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

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

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

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

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

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

C. A copy of all compliance certifications shall also be submitted to the EPA Administrator.

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

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

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

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

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

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

IX. INSPECTION AND ENTRY

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

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

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

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

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

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

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

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

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

E. Record any inspection by use of written, electronic, magnetic and photographic media.

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

X. ACCIDENTAL RELEASE PROGRAM

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

[40 CFR Part 68]

XI. EXCESS EMISSIONS AND PERMIT DEVIATIONS

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A. Excess Emissions Reporting

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

1. Excess emissions shall be reported as follows:

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

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

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

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

   b. The report shall contain the following information:

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

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

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

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

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

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

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

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

      (5) Nature and cause of such emissions;

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

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

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

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

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

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

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

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

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

B. Permit Deviations Reporting

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

1. Notice that complies with Condition XI.A.1 above is prompt for deviations that constitute excess emissions;

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

2. Notice that is submitted within two (2) working days of discovery of the deviation is prompt for deviations of permit conditions identified by Condition I.B.2 of Attachment “B”;

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

3. Except as provided in Conditions XI.B.1 and 2 above, prompt notification of all other types of deviations shall be every 6 months, concurrent with the semiannual compliance certifications required in Section VII, and can be submitted via myDEQ, the Arizona Department of Environmental Quality’s online portal.

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

C. Emergency Provision

1. An “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include

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noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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

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

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

3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

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

b. The permitted facility was being properly operated at the time of the emergency;

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

c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

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

d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

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

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

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

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

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

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

1. Applicability

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

a. Promulgated pursuant to Sections 111 or 112 of the Act;
[A.A.C. R18-2-310.A.1]
[State Enforceable Only]

b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;
[A.A.C. R18-2-310.A.2]
[State Enforceable Only]

c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
[A.A.C. R18-2-310.A.3]
[State Enforceable Only]

d. Contained in A.A.C. R18-2-715.F; or
[A.A.C. R18-2-310.A.4]
[State Enforceable Only]

e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.
[A.A.C. R18-2-310.A.5]

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
[A.A.C. R18-2-310.B]
[State Enforceable Only]

a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
[A.A.C. R18-2-310.B.1]
[State Enforceable Only]

b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
[A.A.C. R18-2-310.B.2]
[State Enforceable Only]

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

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practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

[A.A.C. R18-2-310.B.3]
[State Enforceable Only]

d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

[A.A.C. R18-2-310.B.4]
[State Enforceable Only]

e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

[A.A.C. R18-2-310.B.5]
[State Enforceable Only]

f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

[A.A.C. R18-2-310.B.6]
[State Enforceable Only]

g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

[A.A.C. R18-2-310.B.7]
[State Enforceable Only]

h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;

[A.A.C. R18-2-310.B.8]
[State Enforceable Only]

i. All emissions monitoring systems were kept in operation if at all practicable; and

[A.A.C. R18-2-310.B.9]
[State Enforceable Only]

j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

[A.A.C. R18-2-310.B.10]
[State Enforceable Only]

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

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

[A.A.C. R18-2-310.C.1]
[State Enforceable Only]

(1) The excess emissions could not have been prevented through careful and prudent planning and design;

[A.A.C. R18-2-310.C.1.a]
[State Enforceable Only]

(2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

[A.A.C. R18-2-310.C.1.b]
[State Enforceable Only]

(3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

[A.A.C. R18-2-310.C.1.c]
[State Enforceable Only]

(4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

[A.A.C. R18-2-310.C.1.d]
[State Enforceable Only]

(5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

[A.A.C. R18-2-310.C.1.e]
[State Enforceable Only]

(6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

[A.A.C. R18-2-310.C.1.f]
[State Enforceable Only]

(7) All emissions monitoring systems were kept in operation if at all practicable; and

[A.A.C. R18-2-310.C.1.g]
[State Enforceable Only]

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(8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.

[A.A.C. R18-2-310.C.1.h]
[State Enforceable Only]

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]
[State Enforceable Only]

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]
[State Enforceable Only]

5. Demonstration of Reasonable and Practicable Measures

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

[A.A.C. R18-2-310.E]
[State Enforceable Only]

XII. RECORDKEEPING REQUIREMENTS

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

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

1. The date, place as defined in the permit, and time of sampling or measurements;

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

2. The date(s) any analyses were performed;

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

3. The name of the company or entity that performed the analyses;

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

4. A description of the analytical techniques or methods used;

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

5. The results of analyses; and

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

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6. The operating conditions as existing at the time of sampling or measurement.

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

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

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

XIII. REPORTING REQUIREMENTS

The Permittee shall submit the following reports:

A. Compliance certifications in accordance with Section VII above.

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

B. Excess emission; permit deviation, and emergency reports in accordance with Section XI above.

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

C. Other reports required by any condition of Attachment “B”.

XIV. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the EPA Administrator along with a claim of confidentiality.

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

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

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

XV. PERMIT AMENDMENT OR REVISION

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

A. Administrative Permit Amendment;

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

B. Minor Permit Revision; and

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

C. Significant Permit Revision.

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

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

XVI. FACILITY CHANGE WITHOUT A PERMIT REVISION

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

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

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

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

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

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

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

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

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

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

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

6. The changes do not constitute a minor NSR modification.

[A.A.C. R18-2-317.A.6]

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of Conditions XVI.A, C, and D of this Attachment.

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

C. For each change under Conditions XVI.A and XVI.B above, a written notice by certified mail or hand delivery shall be received by the Director and the EPA Administrator a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions

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necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change, but must be provided as far in advance of the change~~,~~ as possible or, if advance notification is not practicable, as soon after the change as possible.

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

D. Each notification shall include:

1. When the proposed change will occur;

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

2. A description of the change;

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

3. Any change in emissions of regulated air pollutants; and

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

4. Any permit term or condition that is no longer applicable as a result of the change.

[A.A.C. R18-2-317.E.7]

E. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section XVI.

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

F. Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under A.A.C. R18-2-306.A.11 shall not require any prior notice under this Section XVI.

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

G. Notwithstanding any other part of Section XVI, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under Section XVI over the term of the permit, do not satisfy Condition XVI.A above.

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

XVII. TESTING REQUIREMENTS

A. Except as provided in Condition XVII.F below, the Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

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

B. Operational Conditions During Performance Testing

Performance tests shall be conducted under such conditions as the Director shall specify to the plant operator based on representative performance of the source. The Permittee shall make available to the Director such records as may be necessary to determine the conditions of the performance tests. Operations during periods of start-up, shutdown, and malfunction (as defined in A.A.C. R18-2-101)

shall not constitute representative conditions of performance tests unless otherwise specified in the applicable standard.

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

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

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

D. Test Plan

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

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

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

E. Stack Sampling Facilities

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

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

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

F. Interpretation of Final Results

Each performance test shall consist of three 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

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

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

G. Report of Final Test Results

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

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

H. Extension of Performance Test Deadline

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

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

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

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

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

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

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

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

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

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

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

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

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

XVIII. PROPERTY RIGHTS

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

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

XIX. SEVERABILITY CLAUSE

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

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

XX. PERMIT SHIELD

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

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

XXI. PROTECTION OF STRATOSPHERIC OZONE

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

[40 CFR Part 82]

XXII. APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS

For all equipment subject to a New Source Performance Standard or a National Emission Standard for Hazardous Air Pollutants, the Permittee shall comply with all applicable

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requirements contained in Subpart A of Title 40, Chapter 60 and Chapter 63 of the Code of Federal Regulations.

[40 CFR Part 60 Subpart A and Part 63 Subpart A]

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ATTACHMENT "B": SPECIFIC CONDITIONS

I. FACILITY-WIDE REQUIREMENTS

A. Opacity

1. Instantaneous Surveys and Six-Minute Observations

a. Instantaneous Surveys

Any instantaneous survey required by this permit shall be determined by either option listed in Conditions I.A.1.a(1) and (2):
[A.A.C. R18-2-311.b]

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

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

(b) The results of all instantaneous surveys and six-minute observations shall be obtained within 2 hours.

(2) EPA Reference Method 9 Certified Observer.
[A.A.C. R18-2-306.A.3.c]

b. Six-Minute Observations

Any six-minute observation required by this permit shall be determined by either option listed in Conditions I.A.1.b(1) and (2):
[A.A.C. R18-2-311.b]

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

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

(b) The results of all instantaneous surveys and six-minute observations shall be obtained within 2 hours.

(2) EPA Reference Method 9.

c. The Permittee shall have on site or on call a person certified in EPA Reference Method 9 unless all 6-minute Method 9 observations required by this permit are conducted as a 6-minute Alternative Method-082 (Digital Camera Operating Technique) and all instantaneous visual surveys required by this permit are conducted

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as an instantaneous Alt-082 camera survey. Any 6-minute Method 9 observation required by this permit can be conducted as a 6-minute Alternative Method-082 and any instantaneous visual survey required by this permit can be conducted as an instantaneous Alt-082 camera survey.

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

2. Monitoring, Recordkeeping, and Reporting Requirements

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

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

b. If the visible emissions on an instantaneous basis appears less than or equal to the applicable opacity standard, then the Permittee shall keep a record of the name of the observer, the date on which the instantaneous survey was made, and the results of the instantaneous survey.

c. If the visible emissions on an instantaneous basis appears greater than the applicable opacity standard, then the Permittee shall immediately conduct a six-minute observation of the visible emissions.

(1) If the six-minute observation of the visible emissions is less than or equal to the applicable opacity standard, then the Permittee shall record the name of the observer, the date on which the six-minute observation was made, and the results of the six-minute observation.

(2) If the six-minute observation of the visible emissions is greater than the applicable opacity standard, then the Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to less than or equal to the opacity standard;

(b) Record the name of the observer, the date on which the six-minute observation was made, the results of the six-minute observation, and all corrective action taken; and

(c) Report the event as an excess emission for opacity in accordance with Condition XI.A of Attachment “A”.

(d) Conduct another six-minute observation to document the effectiveness of the adjustments or repairs completed.

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B. Reporting Requirements

1. At the time that the semiannual compliance certifications required by Section VII of Attachment “A” are submitted, the Permittee shall submit reports of all monitoring activities required by this permit, performed in the same six-month period as it applies to each semiannual compliance certification period.

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

2. Deviations from the following Attachment “B” permit conditions shall be promptly reported in accordance with Condition XI.B.2 of Attachment “A”:

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

a. Attachment “B”:

(1) Conditions III.C.2.b(1) through III.C.2.b(3);

(2) Conditions III.D.2.b(2); and

(3) Conditions III.E.4.b.

b. Attachment “C”:

(1) Conditions III.B.2.a through III.B.2.b;

(2) Conditions III.C.3.a through III.C.3.b;

(3) Conditions VI.B.2.a and VI.B.2.b;

(4) Condition VI.D.2.a;

(5) Condition VI.G.2.a;

(6) Condition VI.I.4.a(1); and

(7) Condition VII.B.3.a.

C. The Conditions of this Attachment shall apply to the equipment identified in Attachment "D”. In the event that the Permittee identifies equipment existing at the plant at the time of permit issuance, but not included in the permit application for this permit, or if the Permittee identifies errors in Attachment "D", the Permittee shall follow the appropriate administrative procedures set forth in Article 3 of Title 18, Chapter 2 of the Arizona Administrative Code to include such equipment in the permit or correct such errors.

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

D. The following Conditions apply to existing sources, as defined in A.A.C. R18-2-701.23, that are not otherwise subject to standards of performance under A.A.C. Title 18, Chapter 2, Articles 7, 9, or 11.

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1. The Permittee shall not cause, allow, or permit gaseous or odorous materials to be emitted from equipment, operations or premises under its control in such quantities or concentrations as to cause air pollution.
[A.A.C. R18-2-730.D]

2. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.
[A.A.C. R18-2-730.G]

II. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to:

1. Fugitive dust sources facility-wide; and

2. Low-grade and high-grade limestone storage piles.

B. Particulate Matter and Opacity

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

1. Emission Limitations and Standards

a. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40% measured in accordance with 40 CFR 60, Appendix A, Reference Method 9.
[A.A.C. R18-2-614]

b. The Permittee shall not or allow visible emissions from low-grade or high-grade limestone storage piles in excess of 20% opacity.
[Consent Decree 4:10-cv-00573-DCB, Condition II.B of Exhibit A]

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

(1) For a building or its appurtenances, or a building or subdivision site, or a driveway, or a parking area, or a vacant lot or sales lot, or an urban or suburban open area to be constructed, used, altered, repaired, demolished, cleared, or leveled, or the earth to be moved or excavated, keep dust and other types of air contaminants to a minimum by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering,

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landscaping, continuous wetting, detouring, barring access, or other acceptable means;

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

(2) Keep dust to a minimum from vacant lots or an urban or suburban open area where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means;

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

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

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

(4) Take reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods to prevent significant amounts of airborne dust from becoming airborne when crushing, screening, handling, transporting or conveying of materials or other operations;

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

(5) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust. Earth or other material that is deposited by trucking or earth moving equipment shall be removed from paved streets by the person responsible for such deposits;

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

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

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

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

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

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

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

d. Paving

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(1) *The Permittee shall maintain the plant road segments paved in 1991, 1992, 1995, 1996, 2023, and 2027 in a paved condition. The Permittee shall maintain records identifying these paved road segments. These records shall be available upon request to ADEQ.*

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

e. Dust Control Requirements for Unpaved Roads

(1) *The Permittee shall operate at all times in conformance with the Dust Control Plan approved by the Director. The Dust Control Plan shall be designed to achieve a 65% control efficiency for the following road segments:*

[A.A.C. R18-2-306.01 and A.A.C. R 18-2-331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

(a) All active roads at the quarry;

(b) The unpaved segments of the road from Avra Valley road to Twin Peaks Road;

(c) The unpaved segments of the roads from the Canal to Avra Valley Road; and

(d) The following active unpaved roads at the cement plant: East Road, West Road, Coal/Coke Storage Area Road, Central Control Road, and Reclaimer Road.

(2) *The Permittee shall operate at all times in conformance with the Dust Control Plan approved by the Director. The Dust Control Plan shall be designed to achieve an 85% control efficiency for the unpaved road segments associated with aggregate operations, to be achieved from a combination of watering and vehicle speed restrictions. Aggregate operations include:*

(a) *The Twin Peaks Rock and Stone Aggregate Plant;*

(b) *The Cotton Field Primary and Overland Plant;*

(c) *The Manufactured Fines Plant;*

(d) *The Wash Plant; and*

(e) *The Concrete Batch Plant.*

[A.A.C. R18-2-306.01 and A.A.C. R 18-2-331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

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(3) The Permittee shall maintain diagrams of the road segments referenced in Condition II.B.1.e(1) above.

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

f. Open Burning

(1) Except as provided in Condition II.B.1.f(2) below, and except when permitted to do so by either the Director or the local officer delegated the authority for issuance of open burning permits, the Permittee shall not ignite, cause to be ignited, permit to be ignited, or suffer, allow or maintain any open outdoor fire.

[A.A.C. R18-2-602.B]

(a) "Open outdoor fire" means any combustion of combustible material of any type outdoors, in the open where the products of combustion are not directed through a flue. Cutting torches welding, open flames used in the maintenance and repair of stationary or mobile equipment, coal fires, explosives, fuses and blasting agents used in the quarry and torches used to ignite the Kiln 1-4 are not open outdoor fires.

[A.A.C. R18-2-602.A]

(b) "Flue," as used in (a) above, means any duct or passage for air, gases or the like, such as a stack or chimney.

[A.A.C. R18-2-602.A]

(2) The following fires are exempted from the prohibition in Condition II.B.1.f(1) of this Attachment:

[A.A.C. R18-2-602.C]

(a) Fires used only for:

(i) Cooking of food,

(ii) Providing warmth for human beings,

(iii) Recreational purposes,

(iv) Branding of animals,

(v) Orchard heaters for the purpose of frost protection in farming or nursery operations, or

(vi) The proper disposal of flags under 4 U.S.C. 1, § 8.

[A.A.C. R18-2-602.C.1]

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(b) Any fire set or permitted by any public officer in the performance of official duty, if the fire is set or permission given for the following purpose:
[A.A.C. R18-2-602.C.2]

(i) Control of an active wildfire; or

(ii) Instruction in the method of fighting fires.

(c) Fire set by or permitted by the Director of Department of Agriculture for the purpose of disease and pest prevention in an organized, area-wide control of an epidemic or infestation affecting livestock or crops.
[A.A.C. R18-2-602.C.3]

(d) Prescribed burns set by or assisted by the federal government or any of its departments, agencies, or agents, or the state or any of its agencies, departments, or political subdivisions, regulated under Article 15 of A.A.C. R18-2.
[A.A.C. R18-2-602.C.4]

2. General Limitation on Visible Emissions

The Permittee shall not cause or permit the airborne diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions became airborne.
[Pima County Applicable SIP Rule 343]

a. In actual practice, the airborne diffusion of visible emissions across property lines shall be prevented by appropriately controlling the emissions at the point of discharge, or ceasing entirely the activity or operation which is causing or contributing to the emissions.
[Pima County Applicable SIP Rule 343.A.1]

b. Condition II.B.2.a shall not apply when the naturally induced wind speed exceeds 25 miles per hour as estimated by a certified visible emission evaluator using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by a U.S. Weather Bureau Section or a U.S. Government military installation.
[Pima County Applicable SIP Rule 343.B]

(1) The exception in Condition II.B.2.b shall not apply to the demolition, destruction, transport, or pulverization of structures containing friable asbestos materials, and all dust producing activities associated with such sources shall be halted when the wind is causing or contributing visible emissions to cross beyond the property lines within which the emissions discharge.
[Pima County Applicable SIP Rule 343.B.1]

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(2) Any disregard of, neglect of, or inattention to other controls required herein, during any time when Condition II.B.2.b is in effect, shall automatically waive the exception in Condition II.B.2.b, and such relaxation of controls shall be a violation.

[Pima County Applicable SIP Rule 343.B.2]

3. Monitoring, Recordkeeping and Reporting Requirements

a. Property Boundary Visible Emissions Monitoring

(1) Property Boundary Line with the Rillito Community

(a) On the days when there is coal unloading activity at the facility, the Permittee shall conduct daily two (2) visible emissions surveys of the property boundary line with the Rillito Community, in accordance with EPA Reference Method 22. The surveys shall be conducted during the coal unloading activity that occurs in daylight hours.

(b) If there is no coal unloading activity, the Permittee shall conduct daily two (2) visible emissions survey of the property boundary line with the Rillito Community, in accordance with EPA Reference Method 22. The surveys shall be conducted during daylight hours with a minimum of 4 hours between observations.

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

(2) Other Property Boundary Lines

(a) On the days when there is bauxite unloading activity at the facility, the Permittee shall conduct a daily visible emissions survey of the closest property boundary line in accordance with EPA Reference Method 22. The survey shall be conducted during the bauxite unloading activity that occurs in daylight hours.

(b) The daily visible emission surveys in accordance with EPA Reference Method 22 at the Quarry and the Twin Peaks Rock and Stone aggregate plant shall be conducted during daylight hours only when there is activity at each site.

(c) For all property boundary lines other than II.B.3.a(1), II.B.3.a(2)(a), and II.B.3.a(2)(b), the Permittee shall conduct a daily visible emissions survey during

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daylight hours in accordance with EPA Reference Method 22.

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

(3) If visible emissions related to the Permittee's operations are observed to cross a property boundary line, the Permittee shall report the emissions using the excess emission reporting procedures in Section XI of Attachment "A".

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

(4) For each daily visible emissions survey required by Conditions II.B.3.a(1) and II.B.3.a(2) above the Permittee shall maintain the following records:

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

(a) Location, date, time of observation;

(b) Name of the observer;

(c) Results of the observation; and

(d) If corrective action was necessary, a description of the corrective action.

b. Visible Emissions Observation Plan

The Permittee shall conduct Visible Emissions Observation Procedures at least once each calendar month as per the Visible Emissions Observation Plan approved by the Department, and in accordance with Conditions II.B.3.b(1) through II.B.3.b(6) below.

(1) A certified EPA Reference Method 9 observer shall conduct a visual survey of visible emissions from non-point sources and, where applicable, fugitive emissions in accordance with the Visible Emissions Observation Plan, under representative operating conditions.

(2) The Permittee shall keep a record of the name of the observer, the date and time on which the observation was made, the location(s) of the observation, and the results of the observation.

(3) If the observer sees a plume from a non-point source and, where applicable, fugitive emissions source that on an instantaneous basis appears to exceed the applicable opacity standard, then the observer shall, if practicable, take a six-minute EPA Reference Method 9 observation of the plume.

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(4) If the six-minute opacity of the plume is less than the applicable opacity standard, the observer shall make a record of the following:

(a) Location, date, and time of the observation;

(b) The results of the EPA Reference Method 9 observation; and

(c) The name of the observer.

(5) If the six-minute opacity of the plume exceeds the applicable opacity standard, then Permittee shall do the following:

(a) Adjust or repair the controls or equipment to reduce opacity to below the applicable opacity standard;

(b) Record corrective actions;

(c) Report as an excess emission in accordance with Section XI of Attachment "A"; and

(d) Conduct a six-minute EPA Reference Method 9 observation reading within 48 hours after taking corrective action. The results of this observation including date, time, name of the observer, and location shall be recorded.

(6) Any changes to the Visible Emissions Observation Plan approved by the Director shall be made only with the prior approval of the Director.

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

c. The Permittee shall maintain records of maintenance activities conducted on the paved roads identified in Condition II.B.1.d of this Attachment.

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

d. Recordkeeping for Fugitive Dust Work Practice Requirements

(1) The Permittee shall maintain records of the dates on which any of the following activities were performed and all control measures which were employed:

(a) Constructing, altering, or demolishing a building or its appurtenances;

(b) Constructing or reconstructing a roadway, driveway, or parking area. Construction and reconstruction

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activities at the quarry and the aggregate plant are not subject to this Condition.

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

(2) The Permittee shall document deviations from the control measures used for the following activities by recording the date, time, and reason for the deviation:

(a) When moving or excavating earth;

(b) When using parking lots or driveways; and

(c) When engaging in the activities described in Conditions II.B.1.c(1) through II.B.1.c(8) of this Attachment.

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

e. The Permittee shall maintain records of each instance of operation not consistent with the current Dust Control Plan.

f. Each such instance shall be considered a permit deviation and shall be reported in accordance with Section XII of Attachment "A".

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

4. Performance Test

The Permittee shall conduct an annual performance test in accordance with Method 9 of 40 CFR 60 Appendix A to determine compliance with the 20% opacity limit for low-grade and high-grade limestone storage piles.

[Consent Decree 4:10-cv-00573-DCB, Condition II.D of Exhibit A]

5. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with A.A.C. R18-2-614, A.A.C.R18-2-702.B.3, 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, A.A.C. R18-2-602.A, A.A.C. R18-2-602.B, A.A.C. R18-2-602.C and Pima County SIP Rule 343.

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

III. ROCK CRUSHING AND SCREENING ACTIVITIES

A. Applicability

This Section is applicable to the equipment identified in the following Sections of the Equipment list in Attachments "D":

1. Section I Quarry Crushing System

2. Section II Overland Conveyor System

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3. Section III Stacker/Reclaimer and Storage Area

4. Section IV Roller Mill Feed Area

5. Section VII Raw Feed Material to Rock Storage

6. Section XXII Twin Peaks Rock and Stone Aggregate Plant

7. Section XXIII Cotton Field Primary and Overland Plant

8. Section XXIV Manufactured Fines Plant

9. Section XXV Wash Plant

10. Section XXIII Portable Grizzly Screen when Processing Limestone/Gypsum

B. General Requirements

1. *The Permittee shall not process more than the following throughputs in the Twin Peaks Rock and Stone Aggregate Plant:*

   a. *1,400,000 tons of material from conveyors B11-BC1, B11-BC2, B11-TS-BC1, and B11-TS-BC2 in any 12-month rolling period; and*

   b. *1,100,000 tons of material from all other equipment in any 12-month rolling period.*

   [A.A.C. R18-2-306.01.A and -331.A.3.a]
   [Material Permit Conditions are indicated by underlines and italics]

2. *The Permittee shall not process more than 1,100,000 tons of material in the Cotton Field Primary and Overland Plant in any 12-month rolling period.*
   [A.A.C. R18-2-306.01.A and -331.A.3.a]
   [Material Permit Conditions are indicated by underlines and italics]

3. *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.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.
   [A.A.C. R18-2-306.A.3.d, -331.A.3.c, -331.B, and 722.F]
   [Material Permit Conditions are indicated by underlines and italics]

4. The Permittee shall demonstrate compliance by conducting, and maintaining record of, annual calibration checks with Condition III.B.3 above.
   [A.A.C. R18-2-306.A.3.c]

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5. The Permittee shall keep records of every 12-month rolling total weight of material processed in tons to demonstrate compliance with Conditions III.B.1.a, III.B.1.b, and III.B.2. These records shall be made available upon request to ADEQ.

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

6. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-722.F.

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

C. Equipment Not Subject to New Source Performance Standards (NSPS)

1. Applicability

This Subsection is applicable to the affected facilities in Section III.A above that are either constructed on or before August 31, 1983 or exempt from the requirements of NSPS Subpart OOO.

2. Particulate Matter and Opacity

a. Emission Limits and Standards

(1) 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:

[P.C.C. 17.16.370.B]

(a) 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:

$E = 3.59\ P^{0.62}$

Where:

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

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

(b) 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:

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$E = 17.31\ P^{0.16}$

Where "E" and "P" are defined as in Condition III.C.2.a(1)(a) above.

(2) Opacity

The Permittee shall not cause to be discharged into the atmosphere from any gravel or stone crushing processes any emissions greater than 20 percent opacity from any plume of effluent.

[A.A.C. R18-2-702.B, P.C.C. 17.16.130.B]

b. Air Pollution Control Requirements

(1) *The Permittee shall operate the following dust collectors in a manner consistent with good air pollution control practice for minimizing particulate matter emissions from the process sources subject to this Subsection.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

(a) B2-DC1;

(b) B3-DC1;

(c) B5-DC1;

(d) B5-DC2;

(e) B5-DC3;

(f) B7-DC1;

(g) B8-DC1;

(h) B8-DC2;

(i) B9-DC1;

(j) B9-DC2;

(k) B9-DC3;

(l) B9-DC5; and

(m) C2-DC1.

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(2) Water 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 water spray bars and nozzles as required by the Director to minimize air pollution.

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

(3) The Permittee shall control fugitive emissions from process sources subject to this Subsection in accordance with the methods listed in Condition II.B.1.c of this Attachment.

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

c. Monitoring, Recordkeeping and Reporting Requirements

(1) The Permittee shall maintain a record of daily production rates of gravel or crushed stone produced.

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

(2) A certified Method 9 observer shall conduct the periodic opacity monitoring method specified in Condition I.A above on a bi-weekly basis from all the stacks while they are in operation.

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

d. Performance Testing Requirements

(1) To demonstrate compliance with Condition III.C.2.a(2), the Permittee shall conduct performance tests on each dust collector listed in Condition III.C.2.b(1) once during the permit term in accordance with EPA Reference Method 9 of 40 CFR Part 60, Appendix A.

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

(2) To demonstrate compliance with Condition III.C.2.a(1), the Permittee shall conduct a performance test once during the permit term on the following dust collectors in accordance with EPA Reference Method 5 of 40 CFR 60, Appendix A:

(a) Dust Collector B2-DC1, B3-DC1

(b) Any one of the following Dust Collectors: B5-DC1, B5-DC2, B5-DC3, and B7-DC1

(c) One of the following Dust Collectors: B9-DC2 and B9-DC3

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(d) Any one of the following Dust Collectors: B8-DC1, B8-DC2, B9-DC1, B9-DC5 and C2-DC1.

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

e. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance P.C.C. 17.16.370.B, P.C.C 17.16.130.B, A.A.C. R18-2-702.B, A.A.C. R18-2-722.D and A.A.C. R18-2-722.E.

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

D. Equipment Subject to Pre-April 22, 2008 New Source Performance Standards (NSPS)

1. Applicability

This Subsection is applicable to the affected facilities in Section III.A that are constructed, modified, or reconstructed after August 31, 1983, but before April 22, 2008.

[40 CFR 60.670]

2. Particulate Matter and Opacity

a. Emission limitations and Standards

(1) The Permittee shall not cause to be discharged into the atmosphere from any affected facility any stack emissions which:

(a) Contain particulate matter in excess of 0.05 grams/dry standard cubic meter (0.022 grains per dry standard cubic foot); and

(b) *Exhibit greater than 7 percent opacity*.

[40 CFR 60.672(a) and A.A.C. R18-2-331.A.3.f]
[Material Permit Conditions are indicated by underlines and italics]

(2) *The Permittee shall not allow to be discharged into the atmosphere from any grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading stations, or from any other affected facility any fugitive emissions (including emissions escaping capture systems) which exhibit visible emissions greater than 10 percent opacity.*

[40 CFR 60.672(b) and A.A.C. R18-2-331.A.3.f]
[Material Permit Conditions are indicated by underlines and italics]

(3) *The Permittee shall not allow to be discharged into the atmosphere from any crusher at which a capture system is*

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not used, any fugitive emissions which exhibit visible emissions greater than 15 percent opacity.

[40 CFR 60.672(b) and A.A.C. R18-2-331.A.3.f]
[Material Permit Conditions are indicated by underlines and italics]

(4) Transfer points to a stockpile and truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher are exempt from the requirements of 40 CFR 60 Subpart OOO.

[40 CFR 60.671 and 60.672(d)]

b. Air Pollution Control Requirements

(1) At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate all affected facilities including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing air emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

(2) *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 practical.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R-18-2-306.01, A.A.C. R18-2-331.A.3. e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

c. Monitoring, Reporting, and Recordkeeping Requirements

A certified Method 9 observer shall conduct the periodic opacity monitoring method specified in Condition I.A above on a bi-weekly basis from the affected stacks while they are in operation.

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

d. Notification Requirements

(1) The Permittee shall furnish to the Director and EPA Administrator for all new facilities that were not previously permitted a written notification as follows:

[40 CFR 60.7]

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(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 a written notification of any physical or operational change to an affected facility 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 40 CFR 60.14(e). 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.
[40 CFR 60.7(a)(4)]

e. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-312, and 40 CFR 60.670, 60.671, 60.672(a), 60.672(b) and 60.672(d).
[A.A.C.R18-2-325]

E. Equipment Subject to Post-April 22, 2008 New Source Performance Standards (NSPS)

1. Applicability

This Subsection is applicable to the affected facilities in Section III.A that are constructed, modified, or reconstructed on or after April 22, 2008.
[40 CFR 60.670]

2. Emission Limitations and Standards

a. *Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from affected facilities with capture systems used to capture and transport particulate matter to a*

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control device any stack emissions that exceed 0.032 g/dscm (0.014 gr/dscf).

[A.A.C. R18-2-331.A.3.f and 40 CFR 60.672(a) including Table 2]
[Material Permit Conditions are indicated by underlines and italics]

b. *Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from crushers at which a capture system is not used any fugitive emissions that exhibit greater than 12% opacity.*

[A.A.C. R18-2-331.A.3.f and 40 CFR 60.672(b) including Table 3]
[Material Permit Conditions are indicated by underlines and italics]

c. *Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall not cause to be discharged into the atmosphere from grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility, except as provide in Condition III.E.2.b above, any fugitive emissions that exhibit greater than 7% opacity.*

[A.A.C. R18-2-331.A.3.f and 40 CFR 60.672(b) including Table 3]
[Material Permit Conditions are indicated by underlines and italics]

d. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of Condition III.E.2.a through III.E.2.c above.

[40 CFR 60.672(d)]

3. Operational Limitations

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d)]

4. Air Pollution Prevention and Control Requirements

a. At all times, the Permittee shall, to the extent practicable, utilize wet suppression on the affected facilities to minimize particulate matter emissions and comply with the applicable emission limitations and standards of Condition III.E.2 above. Wet suppression options include water sprays, surfactant use, water jets, foggers, inherent

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moisture content (including moisture from upstream water sprays), or other equivalent control methods.

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

b. *The Permittee shall operate the following dust collectors in a manner consistent with good air pollution control practice for minimizing particulate matter emissions from the process sources subject to this Subsection.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.2 and -331.A.3.e]
[Material Permit Conditions are indicated by underlines and italics]

(1) B7-DC1;

(2) B11-DC1;

(3) B2-DC2;

(4) B2-DC3;

(5) TP-DC1;

(6) B2-DC4; and

(7) Manufactured Fines Plant Baghouse.

5. Monitoring, Recordkeeping, and Reporting Requirements

a. Except as specified in Condition III.E.5.b, the Permittee shall conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, appendix A-7) for any affected facility that uses a baghouse to control emissions. The Method 22 (40 CFR part 60, appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the Permittee shall initiate corrective action within 24 hours to return the baghouse to normal operation. The Permittee shall record each Method 22 (40 CFR part 60, appendix A-7) test, including the date and any corrective actions taken, in the logbook required under Condition III.E.5.e. The Permittee may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to Condition III.E.6.c simultaneously with a Method 22 (40 CFR part 60, appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limitation in

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Condition III.E.2.a. The revised visible emissions success level must be incorporated into the permit for the affected facility.
[40 CFR 60.674(c)]

b. As an alternative to the periodic Method 22 (40 CFR part 60, appendix A-7) visible emissions inspections specified in Condition III.E.5.a, the Permittee may use a bag leak detection system for any affected facility that uses a baghouse to control emissions. The Permittee shall install, operate, and maintain the bag leak detection system according to Conditions III.E.5.b(1) through III.E.5.b(3).
[40 CFR 60.674(d)]

(1) Each bag leak detection system must meet the specifications and requirements in Conditions III.E.5.b(1)(a) through III.E.5.b(1)(h).
[40 CFR 60.674(d)(1)]

(a) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.
[40 CFR 60.674(d)(1)(i)]

(b) The bag leak detection system sensor must provide output of relative PM loadings. The Permittee shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.*, using a strip chart recorder or a data logger).
[40 CFR 60.674(d)(1)(ii)]

(c) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to Condition III.E.5.b(1)(d), and the alarm must be located such that it can be heard by the appropriate plant personnel.
[40 CFR 60.674(d)(1)(iii)]

(d) In the initial adjustment of the bag leak detection system, the Permittee must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.
[40 CFR 60.674(d)(1)(iv)]

(e) Following initial adjustment, the Permittee shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Director except as provided in Condition III.E.5.b(1)(f).

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[40 CFR 60.674(d)(1)(v)]

(f) Once per quarter, the Permittee may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by Condition III.E.5.b(2).

[40 CFR 60.674(d)(1)(vi)]

(g) The Permittee must install the bag leak detection sensor downstream of the fabric filter.

[40 CFR 60.674(d)(1)(vii)]

(h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

[40 CFR 60.674(d)(1)(viii)]

(2) The Permittee must develop and submit to the Director for approval of a site-specific monitoring plan for each bag leak detection system. The Permittee must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in Conditions III.E.5.b(2)(a) through III.E.5.b(2)(f).

[40 CFR 60.674(d)(2)]

(a) Installation of the bag leak detection system;

[40 CFR 60.674(d)(2)(i)]

(b) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

[40 CFR 60.674(d)(2)(ii)]

(c) Operation of the bag leak detection system, including quality assurance procedures;

[40 CFR 60.674(d)(2)(iii)]

(d) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

[40 CFR 60.674(d)(2)(iv)]

(e) How the bag leak detection system output will be recorded and stored; and

[40 CFR 60.674(d)(2)(v)]

(f) Corrective action procedures as specified in Condition III.E.5.b(3). In approving the site-specific

monitoring plan, the Director may allow the Permittee more than 3 hours to alleviate a specific condition that causes an alarm if the Permittee identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

[40 CFR 60.674(d)(2)(vi)]

(3) For each bag leak detection system, the Permittee must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in Condition III.E.5.b(2)(f), the Permittee must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

[40 CFR 60.674(d)(3)]

(a) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(b) Sealing off defective bags or filter media;

(c) Replacing defective bags or filter media or otherwise repairing the control device;

(d) Sealing off a defective fabric filter compartment;

(e) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(f) Shutting down the process producing the PM emissions.

c. For any affected facility that uses wet suppression to control emissions, the Permittee shall perform monthly inspections to check that water is flowing to the discharge spray nozzles in the wet suppression system. The Permittee must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles. The Permittee must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under Condition III.E.5.e.

[40 CFR 60.674(b)]

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d. If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required by Condition III.E.5.e must specify the control mechanism being used instead of the water sprays.

[40 CFR 60.674(b)(2)]

e. The Permittee must record each periodic inspection required under Condition III.E.5.a or III.E.5.c, including dates and any corrective actions taken, in a logbook (in written or electronic format). The Permittee must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Director upon request.

[40 CFR 60.676(b)(1)]

f. For each bag leak detection system installed and operated according to Condition III.E.5.b, the Permittee must keep the records specified in Conditions III.E.5.f(1) through III.E.5.f(3).

[40 CFR 60.676(b)(2)]

(1) Records of the bag leak detection system output;

[40 CFR 60.676(b)(2)(i)]

(2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

[40 CFR 60.676(b)(2)(iii)]

(3) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

[40 CFR 60.676(b)(2)(iii)]

g. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in Conditions III.E.2.a through III.E.2.c, including reports of opacity observations made using Method 9 (40 CFR part 60, appendix A-4) to demonstrate compliance with Conditions III.E.2.b and III.E.2.c.

[40 CFR 60.676(f)]

h. The Subpart A requirement under 40 CFR 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for the affected facilities.

[40 CFR 60.676(h)]

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i. A notification of the actual date of initial startup of each affected facility shall be submitted to the Director. 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)]

6. Performance Testing Requirements

a. The Permittee shall conduct performance tests on all affected facilities as specified in Condition III.E.6.b through Condition III.E.6.k below.

[40 CFR 60.8, 40 CFR 60.11, 40 CFR 60.672(a) incl. Table 2, and 40 CFR 60.672(b) incl. Table 3]

b. For the purpose of demonstrating initial compliance with Condition III.E.2.a, an initial performance test consisting of stack testing 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 startup of the facility.

[40 CFR 60.8, 60.672(a), and 60.675]

c. The Permittee shall determine compliance with the PM standards in Condition III.E.2.a as follows:

Method 5 of appendix A-3 of 40 CFR 60 or Method 17 of appendix A-6 of 40 CFR 60 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, appendix A-3), 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)]

d. For the purpose of demonstrating initial compliance with Conditions III.E.2.b and III.E.2.c, an initial performance test consisting of 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 startup of the facility.

[40 CFR 60.11, 60.672(b) and 60.675]

e. The Permittee shall conduct a repeat performance test according to 40 CFR 60.11 and 40 CFR 60.675 within 5 years from the previous performance test required in Condition III.E.6.d for fugitive emissions from affected facilities without water sprays.

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[40 CFR 60.11, 60.672(b) and 60.675]

f. If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Condition III.E.6.e provided that the affected facility meets the following criteria:

[40 CFR 60.672(b) and 60.674(b)(1)]

(1) The Permittee of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections shall be conducted according to Condition III.E.5.c and Condition III.E.5.e; and

(2) The Permittee of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required by Condition III.E.6.d.

g. In determining compliance with the particulate matter standards in Conditions III.E.2.b and III.E.2.c, the Permittee shall use Method 9 of Appendix A-4 of 40 CFR 60 and the procedures in 40 CFR 60.11, with the following additions:

[40 CFR 60.675(c)(1)]

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

[40 CFR 60.675(c)(1)(i)]

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (*e.g.,* road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of 40 CFR 60, Section 2.1) must be followed.

[40 CFR 60.675(c)(1)(ii)]

(3) For affected facilities 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.

[40 CFR 60.675(c)(1)(iii)]

h. When determining compliance with Conditions III.E.2.b and III.E.2.c the duration of the Method 9 (40 CFR 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages).

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Compliance with Conditions III.E.2.b and III.E.2.c must be based on the average of the five 6-minute averages.

[40 CFR 60.675(c)(3)]

i. 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)(1)]

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

(2) Separate the emissions so that the opacity of emissions from each affected facility can be read.

j. A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

[40 CFR 60.675(e)(2)]

(1) No more than three emission points may be read concurrently.

(2) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(3) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

k. For performance tests involving only Method 9 (40 CFR 60 Appendix A-4) testing, the Permittee may reduce the 30-day advance notification of performance test in 40 CFR 60.7(a)(6) and 40 CFR 60.8(d) to a 7-day advance notification.

[40 CFR 60.675(g)]

7. Permit Shield

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

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

IV. PORTABLE GRIZZLY SCREEN FOR PROCESSING IRON/CLINKER AND COKE PROCESSING EQUIPMENT

A. Applicability

This Section is applicable to the portable grizzly screen referenced in Section XXIII and the coke processing equipment referenced in Section XXI of the Equipment List in Attachment "D" when used for screening iron/clinker.

B. Particulate Matter and Opacity

1. Emission Limits and Standards

a. The Permittee shall not cause, suffer, allow or permit the discharge of particulate matter into the atmosphere except as fugitive emissions in any one hour from any process source, in total quantities in excess of the amounts calculated by the equations set forth below:

(1) 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:

[P.C.C. 17.16.430.A.1]

$E = 3.59\ P^{0.62}$

Where:

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

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

(2) 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:

$E = 17.31\ P^{0.16}$

Where “E” and “P” are defined as in Condition IV.B.1.a(1) above.

b. The opacity of any plume or effluent from any process source subject to the provisions of this Section shall not be greater than 20%.

[A.A.C. R18-2-702.B and P.C.C 17.16.130B]

2. Monitoring, Recordkeeping and Reporting Requirements

A certified Method 9 observer shall conduct the periodic opacity monitoring method specified in Condition I.A of this Attachment above on a monthly basis from the grizzly system when in operation.

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

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C. Permit Shield

Compliance with the Conditions this Section shall be deemed compliance with the P.C.C. 17.16.130.B and 17.16.430.A.1 and A.A.C. R18-2-702.B.

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

V. ENGINES

A. Applicability

This Section applies to the existing engines listed in Section XXIV of the Equipment List in Attachment "D".

B. Engines Subject to Standards of Performance for Existing Stationary Rotating Machinery under A.A.C R18-2-719

1. Fuel Limitation

a. The Permittee shall burn only natural gas in natural gas fired engines.

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

b. The Permittee shall burn only low sulfur diesel (not to exceed 0.8 percent sulfur) in the diesel-fired engine.

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

2. Particulate Matter and Opacity

a. Emissions Limitations and Standards

(1) The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the generators into the atmosphere in excess of the amounts calculated by the following equation:

$E = 1.02\ Q^{0.769}$

where:

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

Q = the heat input in million Btu per hour.

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

(2) For the purposes of Condition V.B.2.a of this Attachment, 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 shall be used for determining the maximum allowable amount of particulate matter emitted.

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

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

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

b. Monitoring, Reporting, and Recordkeeping Requirements

(1) A certified Method 9 observer shall conduct the periodic opacity monitoring method specified in Condition I.A of this Attachment above on a monthly basis from the stack of the diesel engine when in operation.

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

(2) The Permittee shall keep records of fuel supplier certifications containing information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available upon request to ADEQ.

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

3. Sulfur Dioxide

a. Emission Limitations and Standards

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

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

b. Monitoring, Recordkeeping, and Reporting Requirements

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

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

(2) For CI engines, the Permittee shall keep records of fuel supplier certifications or other documentation listing the sulfur content to demonstrate compliance with the sulfur content limit specified in Condition V.B.3.a of this Attachment. These records shall be made available upon request to ADEQ.

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

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(3) The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the engine exceeds 0.8%.

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

4. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-719.B, 719.C.1, 719.E, 719.F, 719.H, 719.I and 719.J.

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

C. Existing Emergency Engines Subject to NESHAP Requirements for Stationary Reciprocating Internal Combustion Engines (RICE) ≤ 500hp Under 40 CFR 63 Subpart ZZZZ

1. General Operating Limitations and Requirements

a. The Permittee shall comply with the applicable emission limitations and operating limitations at all times.

[40 CFR 63.6605(a)]

b. At all times, the Permittee shall operate and maintain the engines, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 63.6605(b)]

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

[40 CFR 63.6625(h)]

d. The Permittee shall operate and maintain the engines in accordance with manufacturer’s emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR63.6625(e)(2)]

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2. Fuel Requirements

For existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates for the purpose specified in Condition V.C.3.c(3) of this Attachment, the Permittee shall use diesel fuel that meets the requirements in 40 CFR 1090.305 for nonroad diesel fuel. The requirements in 40 CFR 1090.305 include:

a. Sulfur content ≤ 15 ppm; and

b. Cetane index ≥ 40 or aromatic content ≤ 35% by volume.

[40 CFR 63.6604(b)]

3. Operation and Maintenance Requirements

a. The Permittee shall comply with the following operation and maintenance requirements:

[40 CFR 63.6602, Table 2C of Subpart ZZZZ]

(1) The Permittee shall change the oil and filter every 500 hours operation or annually, whichever comes first. If the Permittee prefers to extend the oil change requirement, an oil analysis program described below shall be completed. The oil analysis must be performed at the same frequency specified for changing the oil. The Permittee shall at a minimum analyze the following three parameters: Total Acid Number (for SI engines), Total Base Number (for CI engines), viscosity and water content. The condemning limits for these parameters are as follows:

(a) For the natural gas-fired engine, Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new.

(b) For the diesel-fired engine, Total Base Number is less than 30 percent of the Total Base Number of the oil when new.

(c) Viscosity: changed more than 20 percent from the viscosity of oil when new; and

(d) Water Content: greater than 0.5 percent by volume.

(e) If all of the above limits are not exceeded, the Permittee is not required to change the oil. If any of the above limits are exceeded, the Permittee shall change the oil within 2 business days of receiving the results of the analysis or before commencing

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operation, whichever is later. Records shall be kept of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the operation of the engine

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

(2) The Permittee shall, every 1,000 hours of operation or annually, whichever comes first, inspect and replace as necessary, spark plugs for SI engine, and/or air cleaner for CI engine.

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

(3) The Permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

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

(4) If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Conditions V.C.3.a(1) through V.C.3.a(3) , or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated.

[40 CFR 63 Subpart ZZZZ, Table 2c]

b. *The Permittee shall install non-resettable hour meters on the emergency engines if already not installed.*

[40 CFR 63.6625(f) and A.A.C. R-18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

c. The Permittee shall operate the emergency engines according to the requirements in Conditions V.C.3.c(1) and V.C.3.c(3) below. If the engine is not operated according to the requirements in Conditions V.C.3.c(1) and V.C.3.c(3) below, then the engine will not be considered an emergency engine and shall meet all requirements for non-emergency engines.

[40 CFR 63.6640(f)]

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

[40 CFR 60.6640(f)(1)]

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

[40 CFR 63.6640(f)(2)]

(3) The Permittee may operate an emergency engine for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 CFR 63.6640(f)(3)]

4. Compliance Demonstration

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

[40 CFR 63.6640(a), 63.6655(d), and 40 CFR 63 Subpart ZZZZ, Table 6, Item 9]

5. Recordkeeping Requirements

a. The Permittee shall keep records described below:

(1) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

[40 CFR 63.6655(a)(2)]

(2) Records of all required maintenance performed on the air pollution control and monitoring equipment.

[40 CFR 63.6655(a)(4)]

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(3) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition V.C.1.b including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655(a)(5)]

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

[40 CFR 63.6655(e)(2)]

c. The Permittee shall keep records of the hours of operation of the RICE that is recorded through the non-resettable hour meter. Records shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in Condition V.C.3.c(3) the Permittee shall keep records of the notification of the emergency situation and the date, start time, and end time of the engine operation for these purposes.

[40 CFR 63.6655(f)]

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

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

e. The Permittee shall report each instance in which the requirements of 40 CFR 63, Subpart ZZZZ, Table 2c were not met. These instances are deviations from the emission and operating limitations. These deviations must be reported according to Condition V.C.5.a.

[40 CFR 63.6640(b)]

f. The Permittee shall keep records in a form suitable and readily available for expeditious review. The records shall readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).

[40 CFR 63.6660(a), (b) and (c)]

6. Reporting Requirements

The Permittee shall report all deviations as defined in 40 CFR 63, Subpart ZZZZ along with the semiannual compliance certifications.

[40 CFR 63.6650(f)]

7. Permit Shield

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Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR Part 63.6602, 63.6605(b), 63.6625(e), 63.6625(f), 63.6625(h), 63.6625(i), 63.6625(j), 63.6640(a), 63.6640(f), 63.6655(e)(2), 63.6655(f) and 63.6660(a), (b) and (c)

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

D. New Non-Emergency Engines Subject to NSPS Requirement for CI ICE Under 40 CFR 60 Subpart IIII

1. Fuel Requirements

For stationary CI ICE with a displacement of less than 30 liters per cylinder that use diesel fuel, the Permittee shall use diesel fuel that meets the following requirements of 40 CFR 1090.305 for non-road diesel fuel

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)]

2. Emission Limitations and Standards

a. For 2014 model year and later Tier 4 non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the following emission standards:

[40 CFR 60.4201(a) and 60.4204(b), and 40 CFR 1039.101]

(1) Particulate Matter (PM)

The Permittee shall limit the emissions of PM from the engine to 0.03 g/kW-hr.

(2) Carbon Monoxide (CO)

The Permittee shall limit the emissions of CO from the engine to 3.5 g/kW-hr.

(3) Nitrogen Oxides (NOx)

The Permittee shall limit the emissions of NOx from the engine to 0.67 g/kW-hr.

(4) Non-Methane Hydrocarbons (NMHC)

The Permittee shall limit the emissions of NMHC from the engine to 0.19 g/kW-hr.

b. The Permittee shall limit exhaust opacity from the engine (excluding single cylinder and constant speed engines) to not exceed:

[40 CFR 60.4201(a), 60.4204(b), and 40 CFR 1039.105]

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(1) 20 percent during the acceleration mode;

(2) 15 percent during the lugging mode; and

(3) 50 percent during the peaks in either the acceleration or lugging mode.

3. Operating Requirements

a. The Permittee shall operate and maintain the engines that achieve the emission standards as required in Condition V.D.2.a of this Attachment over the entire life of the engine.

[40 CFR 60.4206]

b. If the engine is equipped with a diesel particulate filter to comply with the emission standards in Condition V.D.2.a of this Attachment. The diesel particulate filter shall be installed with a backpressure monitor that notifies the Permittee when the high backpressure limit of the engine is approached.

[40 CFR 60.4209(b)]

c. The Permittee shall operate and maintain the engine and any control device according to the manufacturer's written instructions, except as permitted by Condition V.D.4.a of this Attachment.

[40 CFR 60.4211(a)(1)]

d. The Permittee shall only change those emission related settings that are permitted by the manufacturer, except as permitted by Condition V.D.4.b of this Attachment.

[40 CFR 60.4211(a)(2)]

e. The Permittee shall meet the applicable requirements of 40 CFR Part 1068, as they apply to the Permittee.

[40 CFR 60.4211(a)(3)]

4. Compliance Requirements

a. The Permittee shall comply by purchasing an engine certified to the emission standards in Condition V.D.2.a. The engine must be installed and configured according to the manufacturer's emission related specifications, except as permitted by Condition V.D.4.b of this Attachment.

[40 CFR 60.4211(c)]

b. If the Permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution

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control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the Permittee changes emission-related settings in a way that is not permitted by the manufacturer.

[40 CFR 60.4211(g)(3)]

5. Recordkeeping Requirement

If the engine is equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has provided notification that the high backpressure limit of the engine is approached.

[40 CFR 60.4214(c)]

6. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 60.4201(a), 60.4204(b), 60.4206, 60.4207(b), 60.4209(b), 60.4211(a), 60.4211(c), 60.4211(g)(3), 60.4214(c).

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

E. New Non-Emergency Engines Subject to the NESHAP Requirements for CI Stationary RICE Under 40 CFR 63 Subpart ZZZZ

1. Emission Limitations and Standards

a. The Permittee shall comply with the following emission limitations, except during periods of startup:

[40 CFR 63 Subpart ZZZZ , Table 2a, Item 3]

(1) Reduce CO emissions by 70 percent or more; or

(2) Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2.

b. The Permittee shall comply with the applicable emission limitations and operating limitations at all times

[40 CFR 63.6605(a)]

c. At all times, the Permittee shall operate and maintain the engines, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on

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information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 63.6605(b)]

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

[40 CFR 63.6625(h)]

2. Operation and Maintenance Requirements

a. The Permittee shall meet the following operating limitations, except during periods of startup:

[40 CFR 63 Subpart ZZZZ, Table 2b, Item 1]

(1) Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and

(2) Maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.

b. Initial Performance Tests or Compliance Demonstrations

(1) The Permittee shall conduct the initial performance test or other initial compliance demonstrations in Table 4 to 40 CFR 63 Subpart ZZZZ that is applicable within 180 days after the compliance date that is specified for the stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

[40 CFR 63.6610(a)]

(2) The Permittee is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the following conditions.

[40 CFR 63.6610(d)]

(a) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

[40 CFR 63.6610(d)(1)]

(b) The test must not be older than 2 years.

[40 CFR 63.6610(d)(2)]

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(c) The test must be reviewed and accepted by the EPA Administrator.

[40 CFR 63.6610(d)(3)]

(d) Either no process or equipment changes must have been made since the test was performed, or the Permittee must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[40 CFR 63.6610(d)(4)]

(e) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[40 CFR 63.6610(d)(5)]

(3) If the Permittee must comply with the emission limitations and operating limitations, the Permittee shall conduct subsequent performance tests as specified in Table 3 of 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6615]

c. Performance Test Procedures

(1) The Permittee shall conduct each applicable performance test in Tables 3 and 4 of 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6620(a)]

(2) Each performance test must be conducted according to the requirements specified in Table 4 to 40 CFR 63 Subpart ZZZZ. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE.

[40 CFR 63.6620(b)(4)]

(3) The Permittee shall conduct three separate test runs for each performance test required in this section, as specified in 40 CFR 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6620(d)]

(4) The Permittee shall use Equation 1 of 40 CFR 63.6620(e)(1) to determine compliance with the percent reduction requirement.

[40 CFR 63.6620(e)(1)]

(5) The Permittee shall normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO2) in accordance with 40 CFR 63.6620(e)(2).

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[40 CFR 63.6620(e)(2)]

(6) If the Permittee complies with the emission limitation to reduce CO and is not using an oxidation catalyst, if the Permittee complies with the emission limitation to reduce formaldehyde and is not using NSCR, or if the Permittee complies with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and is not using an oxidation catalyst or NSCR, the Permittee shall petition the EPA Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. The Permittee shall not conduct the initial performance test until after the petition has been approved by the EPA Administrator.

[40 CFR 63.6620(f)]

(7) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[40 CFR 63.6620(i)]

d. Monitoring Requirements

(1) If a CEMS is used, install, operate, and maintain the CEMS to monitor CO and either O_2 or CO_2 according to the following requirements. For compliance with the CO emissions reduction requirement, the CEMS must be installed at both the inlet and outlet of the control device. For compliance with the CO concentration limitation requirement, the CEMS must be installed at the outlet of the control device.

[40 CFR 63.6625(a)]

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(a) Install, operate, and maintain the CEMS according to the applicable performance specifications of 40 CFR Part 60, Appendix B.

[40 CFR 63.6625(a)(1)]

(b) Conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in 40 CFR 63.8 and according to the applicable performance specifications of 40 CFR Part 60, Appendix B as well as daily and periodic data quality checks in accordance with 40 CFR Part 60, Appendix F, procedure 1.

[40 CFR 63.6625(a)(2)]

(c) Each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. At least two data points, with each representing a different 15-minute period, are required to have a valid hour of data.

[40 CFR 63.6625(a)(3)]

(d) The CEMS data must be reduced as specified in 40 CFR 63.8(g)(2) and recorded in parts per million or parts per billion at 15 percent oxygen or the equivalent CO2 concentration.

[40 CFR 63.6625(a)(4)]

(2) If a continuous parameter monitoring system (CPMS) is required, as specified in Table 5 of 40 CFR 63 Subpart ZZZZ, the Permittee shall install, operate, and maintain each CPMS according to the following requirements.

[40 CFR 63.6625(b)]

(a) The Permittee shall prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in Conditions V.E.2.d(2)(a)(i) through (v). The Permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in Conditions V.E.2.d(2)(a) through (e) of this Subsection in the site-specific monitoring plan;

[40 CFR 63.6625(b)(1)]

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface,

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detector signal analyzer, and data acquisition and calculations;
[40 CFR 63.6625(b)(1)(a)]

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
[40 CFR 63.6625(b)(1)(b)]

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;
[40 CFR 63.6625(b)(1)(c)]

(iv) Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c)(1)(ii) and (c)(3); and
[40 CFR 63.6625(b)(1)(d)]

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e)(1), and (e)(2)(i).
[40 CFR 63.6625(b)(1)(e)]

(b) The Permittee shall install, operate, and maintain each CPMS in continuous operation according to the procedures in the site-specific monitoring plan.
[40 CFR 63.6625(b)(2)]

(c) The CPMS must collect data at least once every 15 minutes (see also 40 CFR 63.6635).
[40 CFR 63.6625(b)(3)]

(d) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
[40 CFR 63.6625(b)(4)]

(e) The Permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.
[40 CFR 63.6625(b)(5)]

(f) The Permittee shall conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.
[40 CFR 63.6625(b)(6)]

3. Compliance Demonstration

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a. Initial Compliance

(1) The Permittee shall demonstrate initial compliance with each emission limitation, operating limitation, and other applicable requirement according to Table 5 of 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6630(a)]

(2) During the initial performance test, the Permittee shall establish each applicable operating limitation in Table 2b of 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6630(b)]

(3) The Permittee shall submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.6645.

[40 CFR 63.6630(c)]

b. Continuous Compliance

(1) If the Permittee must comply with emission and operating limitations, the Permittee shall monitor and collect data according to this section.

[40 CFR 63.6635(a)]

(2) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the Permittee shall monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 63.6635(b)]

(3) The Permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The Permittee shall, however, use all the valid data collected during all other periods.

[40 CFR 63.6635(c)]

c. The Permittee shall demonstrate continuous compliance with each applicable emission limitation, operating limitation, and other requirements in Tables 2a and 2b of 40 CFR 63 Subpart ZZZZ in accordance with methods specified in Table 6 of 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6640(a), 40 CFR 63 Subpart ZZZZ, Table 6, Item 9]

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4. Recordkeeping Requirements

a. The Permittee shall keep records described below:

(1) A copy of each notification and report submitted to comply with this Subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted.

[40 CFR 63.6655(a)(1)]

(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

[40 CFR 63.6655(a)(2)]

(3) Records of performance tests and performance evaluations.

[40 CFR 63.6655(a)(3)]

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

[40 CFR 63.6655(a)(4)]

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition V.E.1.c of this Attachment including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655(a)(5)]

b. The Permittee shall keep records in a form suitable and readily available for expeditious review. The records shall be readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1).

[40 CFR 63.6660(a), (b)and (c)]

5. Reporting Requirements

a. The Permittee shall report each instance in which the requirements of 40 CFR 63, Subpart ZZZZ, Tables 2a and 2b were not met. These instances are deviations from the emission and operating limitations. These deviations must be reported according to the requirements in Condition V.E.5.b of this Attachment.

[40 CFR 63.6640(b)]

b. The Permittee shall report each instance in which the applicable requirements in Table 8 to 40 CFR 63 Subpart ZZZZ were not met.

[40 CFR 63.6640(e)]

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c. The Permittee shall submit all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply by the dates specified.

[40 CFR 63.6645(a)]

d. The Permittee shall submit an Initial Notification no later than 120 days after becoming subject to this subpart.

[40 CFR 63.6645(c)]

e. If a performance test is required, the Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

[40 CFR 63.6645(g)]

f. If a performance test or other initial compliance demonstration is required as specified in Tables 4 and 5 to 40 CFR 63 Subpart ZZZZ, the Permittee shall submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii).

[40 CFR 63.6645(h)]

(1) For each initial compliance demonstration required in Table 5 to 40 CFR 63 Subpart ZZZZ that does not include a performance test, the Permittee shall submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

[40 CFR 63.6645(h)(1)]

(2) For each initial compliance demonstration required in Table 5 to 40 CFR 63 Subpart ZZZZ that includes a performance test conducted according to the requirements in Table 3 to this subpart, the Permittee shall submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR 63.10(d)(2).

[40 CFR 63.6645(h)(2)]

g. The Permittee shall submit compliance reports as required in Table 7 of 40 CFR 63 Subpart ZZZZ.

[40 CFR 63.6650(a)]

h. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the Permittee shall submit each compliance report by the date in Table 7 of 40 CFR 63 Subpart ZZZZ and according to the following requirements:

[40 CFR 63.6650(b)]

(1) For semiannual compliance reports, the first compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR

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63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in 40 CFR 63.6595.

[40 CFR 63.6650(b)(1)]

(2) For semiannual compliance reports, the first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in 40 CFR 63.6595.

[40 CFR 63.6650(b)(2)]

(3) For semiannual compliance reports, each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

[40 CFR 63.6650(b)(3)]

(4) For semiannual compliance reports, each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

[40 CFR 63.6650(b)(4)]

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR Part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), the Permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in Conditions V.E.5.h(1) through (4).

[40 CFR 63.6650(b)(5)]

(6) For annual compliance reports, the first compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 CFR 63.6595 and ending on December 31.

[40 CFR 63.6650(b)(6)]

(7) For annual compliance reports, the first compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in 40 CFR 63.6595.

[40 CFR 63.6650(b)(7)]

(8) For annual compliance reports, each subsequent compliance report must cover the annual reporting period from January 1 through December 31.

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[40 CFR 63.6650(b)(8)]

(9) For annual compliance reports, each subsequent compliance report must be postmarked or delivered no later than January 31.

[40 CFR 63.6650(b)(9)]

i. The compliance report shall contain the following information.

[40 CFR 63.6650(c)]

(1) Company name and address.

[40 CFR 63.6650(c)(1)]

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

[40 CFR 63.6650(c)(2)]

(3) Date of report and beginning and ending dates of the reporting period.

[40 CFR 63.6650(c)(3)]

(4) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.6605(b), including actions taken to correct a malfunction.

[40 CFR 63.6650(c)(4)]

(5) If there were no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period.

[40 CFR 63.6650(c)(5)]

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

[40 CFR 63.6650(c)(6)]

j. For each deviation from an emission or operating limitation that occurs for a stationary RICE where a CMS is not used to comply with the emission or operating limitations in 40 CFR 63 Subpart ZZZZ, the compliance report must contain the information in 40 CFR 63.6650(c)(1) through (4) and the following information.

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[40 CFR 63.6650(d)]

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
[40 CFR 63.6650(d)(1)]

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
[40 CFR 63.6650(d)(2)]

k. For each deviation from an emission or operating limitation occurring for a stationary RICE where a CMS is being used to comply with the emission and operating limitations, the Permittee shall include the following information.
[40 CFR 63.6650(e)]

(1) The date and time that each malfunction started and stopped.
[40 CFR 63.6650(e)(1)]

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
[40 CFR 63.6650(e)(2)]

(3) The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR 63.8(c)(8).
[40 CFR 63.6650(e)(3)]

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
[40 CFR 63.6650(e)(4)]

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
[40 CFR 63.6650(e)(5)]

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
[40 CFR 63.6650(e)(6)]

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
[40 CFR 63.6650(e)(7)]

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(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
[40 CFR 63.6650(e)(8)]

(9) A brief description of the stationary RICE.
[40 CFR 63.6650(e)(9)]

(10) A brief description of the CMS.
[40 CFR 63.6650(e)(10)]

(11) The date of the latest CMS certification or audit.
[40 CFR 63.6650(e)(11)]

(12) A description of any changes in CMS, processes, or controls since the last reporting period.
[40 CFR 63.6650(e)(12)]

l. For each CEMS or CPMS, the Permittee shall keep the following records:
[40 CFR 63.6655(b)]

(1) Records described in 40 CFR 63.10(b)(2)(vi) through (xi).
[40 CFR 63.6655(b)]

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).
[40 CFR 63.6655(b)]

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in 40 CFR 63.8(f)(6)(i), if applicable.
[40 CFR 63.6655(b)]

m. The Permittee shall keep the records required in Table 6 of 40 CFR 63 Subpart ZZZZ to show continuous compliance with each applicable emission or operating limitation.
[40 CFR 63.6655(d)]

6. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 63.6602, 63.6605(b), 63.6625(e), 63.6625(f), 63.6625(h), 63.6625(i), 63.6625(j), 63.6640(a), 63.6640(f), 63.6655(e)(2), 63.6655(f) and 63.6660(a), (b) and (c).
[A.A.C. R18-2-325]

VI. FUEL BURNING EQUIPMENT

A. Applicability

This Section applies to all boilers and heaters listed in Section XXIV of Equipment List in Attachment “D”.

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B. Fuel Limitation

The Permittee shall only burn natural gas in all the heaters and boilers.

[A.A.C. R18-2-306.01.A and -331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

C. Particulate Matter and Opacity

1. Emission Limits and Standards

a. The Permittee shall not cause, allow, or permit the emission of particulate matter, caused by combustion of fuel, from any fuel burning operation subject to this Section, in excess of the amounts calculated by one of the following equations:

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

(1) For equipment having a heat input rate of 4,200 million BTU per hour or less, the maximum allowable emissions shall be determined by the following equation:

$E = 1.02\ Q^{0.769}$

Where:

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

Q = the heat input rate in million BTU per hour.

(2) For equipment having a heat input rate greater than 4,200 million BTU per hour, the maximum allowable emissions shall be determined by the following equation:

$E = 17.0\ Q^{0.432}$

Where:

(3) E and Q have the same meaning as in Condition VI.C.1.a(1) above.

b. For purposes of this Subsection, 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 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 the emission of any plume from process sources subject to this Section, whose opacity is greater than 15 percent, as determined by EPA Reference Method 9 of 40 CFR Part 60, Appendix A.

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

2. Monitoring, Recordkeeping, and Reporting Requirements

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

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

b. 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

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-724.B, A.A.C R18-2-724.C, and A.A.C R18-2-724.J.

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

D. NESHAP Subpart DDDDD Requirements

1. Applicability

a. This Subsection is applicable to the following boilers and process heaters identified in Attachment "D":

(1) Bunker C Boiler (6.275 MMBtu/hour); and

(2) D4-RM1-HTR (75 MMBtu/hour).

[40 CFR 63.7495(b)]

2. Boiler Tune-ups

a. Initial Tune-Ups

The Permittee shall conduct a performance tune-up for each boiler and process heater according to the procedure described in Condition VI.D.2.c(1) no later than the compliance date of January 31, 2016.

[40 CFR 63.7510(e)]

b. Subsequent Tune-ups

(1) The Permittee shall conduct a subsequent tune-up annually for each boiler and process heater with a heat input capacity of 10 MMBtu/hour or greater according to the procedure described in Condition VI.D.2.c(1). The annual tune-up shall be conducted within 13 months of the previous tune-up.

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[40 CFR 63.7500(a), 7515(d), and Table 3, Item 3]

(2) The Permittee shall conduct a subsequent tune-up every two years for each boiler and process heater with a heat input capacity of greater than 5 MMBtu/hour and less than 10 MMBtu/hour according to the procedure described in Condition VI.D.2.c(1). The biennial tune-up shall be conducted within 25 months of the previous tune-up.
[40 CFR 63.7500(a), 63.7500(e), 7515(d) and Table 3, Item 1]

c. Tune-up Procedure

(1) The Permittee shall conduct initial and periodic tune-up required according to the following steps:
[40 CFR 63.7540(a)(10)]

(a) Inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown;
[40 CFR 63.7540(a)(10)(i)]

(b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
[40 CFR 63.7540(a)(10)(ii)]

(c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the burner inspection until the next scheduled unit shutdown;
[40 CFR 63.7540(a)(10)(iii)]

(d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject;
[40 CFR 63.7540(a)(10)(iv)]

(e) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and
[40 CFR 63.7540(a)(10)(v)]

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(f) Maintain on-site and submit, if requested by the EPA Administrator, a report containing the information below:

[40 CFR 63.7540(a)(10)(vi)]

(i) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

[40 CFR 63.7540(a)(10)(vi)(A)]

(ii) A description of any corrective actions taken as a part of the tune-up; and

[40 CFR 63.7540(a)(10)(vi)(B)]

(iii) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

[40 CFR 63.7540(a)(10)(vi)(C)]

(2) If any affected boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour, the Permittee must conduct a tune-up of the boiler or process heater every 5 years as specified in Condition VI.D.2.c(1)(a) through (f) to demonstrate continuous compliance. The Permittee may delay the burner inspection specified in Condition VI.D.2.c(1)(a) until the next scheduled or unscheduled unit shutdown, but shall inspect each burner at least once every 72 months.

[40 CFR 63.7540(a)](12)]

(3) If the affected boiler or heater is not operating on the required date for a tune-up, the Permittee shall conduct tune-up within 30 calendar days of startup.

[40 CFR 63.7540(a)(13)]

3. One-Time Energy Assessment

a. The Permittee shall conduct a one-time energy assessment for the affected boilers and process heaters according to the procedure described in Condition VI.D.3.b. This shall be conducted by the compliance date of January 31, 2016.

[40 CFR 63.7510(e)]

b. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed

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on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in Item 4 of Table 3, satisfies the energy assessment requirement as required in Conditions VI.D.3.a. The Energy Assessment shall be conducted according to the following steps:

[40 CFR 63.7500(a)(1)] and Table 3, Item 4]

(1) A visual inspection of the boiler or process heater system;

[40 CFR 63.7500(a)(1) and Table 3, Item 4.a]

(2) An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.

[40 CFR 63.7500(a)(1) and Table 3-Item- 4.b]

(3) An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.

[40 CFR 63.7500(a)(1) and Table 3, Item 4.c]

(4) A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.

[40 CFR 63.7500(a)(1) and Table 3, Item 4.d]

(5) A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified.

[40 CFR 63.7500(a)(1) and Table 3, Item 4.e]

(6) A list of cost-effective energy conservation measures that are within the facility's control.

[40 CFR 63.7500(a)(1) and Table 3, Item 4.f]

(7) A list of the energy savings potential of the energy conservation measures identified.

[40 CFR 63.7500(a)(1) and Table 3, Item 4.g]

(8) A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

[40 CFR 63.7500(a)(1) and Table 3, Item 4.h]

4. Notification and Reporting Requirements

a. The Permittee shall submit to the EPA Administrator all of the applicable notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) by the dates specified.

[40 CFR 63.7545(a)]

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b. The Permittee shall submit a Notification of Compliance Status report containing all the applicable information specified below:
[40 CFR 63.7545(e)]

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR 63, Subpart DDDDD, description of the fuel(s) burned, and justification for the selection of fuel(s) burned during the compliance demonstration.
[40 CFR 63.7545(e)(1)]

(2) A signed certification that the Permittee has met all applicable work practice standards.
[40 CFR 63.7545(e)(6)]

(3) In the event of a deviation, the Permittee shall submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.
[40 CFR 63.7545(e)(7)]

(4) In addition to the information required in 40 CFR 63.9(h)(2), the Permittee shall, in the notification of compliance status, include the following certification(s) of compliance, as applicable, and signed by a responsible official:
[40 CFR 63.7545(e)(8)]

(a) This facility complies with the required initial tune-up according to the procedures in Condition VI.D.2.c(1).
[40 CFR 63.7545(e)(8)(i)]

(b) This facility complies with the required energy assessment performed according to the procedures in Condition VI.D.3.b.
[40 CFR 63.7545(e)(8)(ii)]

(5) The Permittee shall submit a compliance report semiannually, annually, biennially, or every 5 years according to the requirements in 40 CFR 63.7550(b).
[40 CFR 63.7550(b) and Item 1, Table 9]

(a) The first compliance report shall cover the period from the compliance date to January 31 or July 31, whichever date is the first date that occurs at least 180 days (or 1. 2, or 5 years, as applicable, if submitting an annual, biennial, or 5-year compliance report) after the compliance date of January 31, 2016.
[40 CFR 63.7550 (b)(1)]

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(b) The first compliance report shall be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date of January 31, 2016. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

[40 CFR 63.7550(b)(2)]

(c) Each subsequent compliance report shall cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1, 2, or 5 year periods from January 1 to December 31.

[40 CFR 63.7550(b)(3)]

(d) Each subsequent compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

[40 CFR 63.7550(b)(4)]

(6) The compliance report shall contain the following information:

[40 CFR 63.7550(c)(5)]

(a) Company and Facility name and address.

[40 CFR 63.7550(c)(5)(i)]

(b) Process unit information, emissions limitations, and operating parameter limitations.

[40 CFR 63.7550(c)(5)(ii)]

(c) Date of report and beginning and ending dates of the reporting period.

[40 CFR 63.7550(c)(5)(iii)]

(d) The total operating time during the reporting period.

[40 CFR 63.7550(c)(5)(iv)]

(e) The date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to Conditions VI.D.2.b(1) and (2). The report shall include the date of the most recent burner inspection if it was not done annually or on a 5-year period and

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was delayed until the next scheduled or unscheduled unit shutdown.

[40 CFR 63.7550(c)(5)(xiv)]

(f) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

[40 CFR 63.7550(c)(5)(xvii)]

(7) The Permittee shall submit all reports electronically using CEDRI that is accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to the EPA Administrator at the appropriate address listed in 40 CFR 63.13. At the discretion of the EPA Administrator, the Permittee shall also submit these reports, to the EPA Administrator in the format specified by the EPA Administrator.

[40 CFR 63.7550(h)(3)]

5. Recordkeeping Requirements

a. The Permittee shall maintain the following records:

[40 CFR 63.7555(a)]

(1) A copy of each notification and report submitted in accordance with Condition VI.D.4.

[40 CFR 63.7555(a)(1)]

(2) Of compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).

[40 CFR 63.7555(a)(2)]

(3) Of the calendar date, time, occurrence and duration of each startup and shutdown.

[40 CFR 63.7555(i)]

(4) Of the type(s) and amount(s) of fuels used during each startup and shutdown.

[40 CFR 63.7555(j)]

b. The Permittee shall maintain the records in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).

[40 CFR 63.7560(a)]

c. The Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record in accordance with 40 CFR 63.10(b)(1).

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[40 CFR 63.7560(b)]

d. The Permittee shall keep each record onsite, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The Permittee can keep the records off site for the remaining 3 years.

[40 CFR 63.7560(c)]

6. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 63.7495(b), 63.7500(a) and (e), 63.7510(e), 63.7515 (d), 63.7540(a)(10), (12) and (13), 63.7545(a) and (e), 63.7550(b) and (c), 63.7555(a), (i) and (j), 63.7560(a) through (c).

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

VII. GASOLINE STORAGE TANK

A. Applicability

This Section applies to the gasoline storage tank listed in Section XXV of Equipment List in Attachment “D” of this permit.

B. Operating Limitations

1. The gasoline storage tank shall be equipped with a submerged filling device or acceptable equivalent, for control of hydrocarbon emissions.

[A.A.C. R18-2-710.B]

2. All pumps and compressors that handle gasoline shall be equipped with mechanical seals or other equipment of equal efficiency to prevent release of organic contaminants into the atmosphere.

[A.A.C. R18-2-710.D]

C. Monitoring and Recordkeeping Requirements

The Permittee shall, for the gasoline storage tank, maintain a file, of the typical Reid vapor pressure of gasoline stored and of dates of storage. Records of the dates on which the storage vessel is empty shall be maintained.

[A.A.C. R18-2-710.E.1]

D. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with A.A.C. R18-2-724.B, A.A.C R18-2-710.B, A.A.C R18-2-710.D and A.A.C R18-2-710.E.1.

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

VIII. DIESEL/USED OIL TANKS

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A. Applicability

The Section is applicable to diesel storage tank, used oil tanks, bunker C oil tank and lube oil tank listed in Section XXV of Equipment List in Attachment "D".

B. Volatile Organic Compounds (VOCs)

1. The storage tank shall be equipped with a submerged filling device or acceptable equivalent, for control of hydrocarbon emissions.
[A.A.C. R18-2-306.A.2]

2. All pumps and compressors that handle volatile organic compounds shall be equipped with mechanical seals or other equipment of equal efficiency to prevent release of organic contaminants into the atmosphere.
[A.A.C. R18-2-306.A.2]

3. Materials including solvents or other volatile compounds, and other chemicals utilized in the processes under this Section shall be processed, stored, used, and transported in such a manner and by means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory.
[A.A.C. R18-2-730.F]

4. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property.
[A.A.C. R18-2-730.G]

C. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with A.A.C. R18-2-730.F and G.
[A.A.C. R18-2-325]

IX. OTHER PERIODIC ACTIVITIES

A. Abrasive Blasting

1. Particulate Matter and Opacity

a. Emission Limitations and Standards

The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the

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atmosphere through the use of good modern practices. Good modern practices include:

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

(1) Wet blasting;

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

(3) Any other method approved by the Director.

b. Opacity

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

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

2. Monitoring and Recordkeeping Requirement

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

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

(1) The date the project was conducted;

(2) The duration of the project; and

(3) Type of control measures employed.

b. Each time an abrasive blasting project is conducted, the Permittee shall monitor visible emissions from the project in accordance with Condition I.A of Attachment “B”.

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

3. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-702.B.3 and -726.

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

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations and Standards

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

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

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

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

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

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

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

(3) For the purposes of Condition IX.B.1.a(1), 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 Condition IX.B.1.a(2), or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

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

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

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

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

(4) Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Condition IX.B.1.a(2), it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

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

b. Monitoring and Recordkeeping Requirements

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

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

(a) The date the project was conducted;

(b) The duration of the project;

(c) Type of control measures employed;

(d) Safety Data Sheets (SDS) for all paints and solvents used in the project; and

(e) The amount of paint consumed during the project.

(2) Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition IX.B.1.b(1).

c. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C.R18-2-727.

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

2. Opacity

a. Emission Limitation and Standard

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

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

b. Monitoring, Recordkeeping and Reporting Requirements

Each time a spray painting project is conducted, the Permittee shall monitor visible emissions in accordance with Condition I.A of Attachment “B”.

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

3. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C.R18-2-702.B.3.

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

C. Demolition and Renovation - Hazardous Air Pollutants

1. Emission Limitation and Standard

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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.12]

2. Monitoring and Recordkeeping Requirement

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

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

3. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-1101.A.12.

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

X. CONRETE BATCH PLANT REQUIREMENTS

A. Applicability

This Section applies to concrete batch plant operations.

B. Opacity

1. Emission Limitations and Standards

a. The Permittee shall not cause, allow, or permit visible emissions from any point source, in excess of 20 percent opacity.

[A.A.C. R18-2-702.B.1]

b. The Permittee shall not cause, allow or permit visible emissions from nonpoint sources in excess of 40 percent opacity as measured by EPA Reference Method 9.

[A.A.C. R18-2-614]

c. Operating Requirements

The Permittee shall control fugitive dust emitted from the concrete batch plant in accordance with Section II of this Attachment.

[A.A.C. R18-2-723]

C. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall conduct bi-weekly opacity monitoring for the concrete batch plant as per Condition I.A of this Attachment.

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

D. Permit Shield

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Compliance with the Conditions of this Section shall be deemed compliance with A.A.C. R18-2-614, -702.B.1, and -723.

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

XI. AMBIENT MONITORING REQUIREMENTS

If the monitored daily average concentration at the ADEQ PM_{10} monitoring site is greater than 150 µg/m^3, ADEQ may notify the Permittee of the exceedance and request a demonstration that the facility's operations did not cause or contribute to the exceedance. Within 30 days of the notification, the Permittee shall provide to the Director an evaluation as to whether any event (including upset conditions) at the facility may have caused or contributed to the exceedance.

[Significant Permit Revision No. 1000547 Condition X]

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ATTACHMENT "C": REQUIREMENTS FOR CEMENT PLANT

I. APPLICABILITY

A. This Attachment is applicable to the Coal Mill System and Portland Cement Plant.

B. The following affected sources in this attachment are subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements under 40 CFR 63 Subpart LLL:

[40 CFR 63.1340(b)]

1. Each kiln;
2. Each clinker cooler;
3. Each raw mill;
4. Each finish mill;
5. Each raw material dryer;
6. Each raw material, clinker, or finished product storage bin;
7. Each conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln;
8. Each bagging and bulk loading and unloading system; and
9. Each open clinker storage pile.

C. Definitions

1. "Operating day" means any 24-hour period beginning at 12:00 midnight during which the kiln produces any amount of clinker. For calculating the rolling 30-day average emissions, kiln operating days do not include the hours of operation during startup or shutdown.

[40 CFR 63.1341]

2. "Rolling average" means the weighted average of all data, meeting QA/QC requirements or otherwise normalized, collected during the applicable averaging period. The period of a rolling average stipulates the frequency of data averaging and reporting. To demonstrate compliance with an operating parameter a 30-day rolling average period requires calculation of a new average value each operating day and shall include the average of all the hourly averages of the specific operating parameter. For demonstration of compliance with an emission limit based on pollutant concentration a 30-day rolling average is comprised of the average of all the hourly average concentrations over the previous 30 operating days. For demonstration of compliance with an emissions limit based on lbs-pollutant

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per production unit the 30-day rolling average is calculated by summing the hourly mass emissions over the previous 30 operating days, then dividing that sum by the total production during the same period.

[40 CFR 63.1341]

3. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown.

[40 CFR 63.1343(a)]

D. Compliance Requirements

1. Schedule of Compliance for HCl

   a. On a quarterly basis, the Permittee shall query calibration gas suppliers on the availability of the NIST-traceable HCl calibration gases and record the information obtained.

   b. Certified progress reports will be submitted to the ADEQ on a semiannual basis detailing the availability of calibration gases, and updated information on the certification progress of the HCl CEMS, if any.

   c. Upon receipt of procurement date for NIST-traceable HCl calibration gases, the Permittee shall notify ADEQ of the following information:

      (1) The approximate date that HCl gases will be delivered to the facility;

      (2) The approximate date for submittal of the Relative Accuracy Test Audit (RATA) protocol to ADEQ; and

      (3) The scheduled HCl CEMS RATA performance test date.

2. Schedule of Compliance for Mercury

   a. On a quarterly basis, the Permittee shall query calibration gas suppliers on the availability of the NIST-traceable mercury calibration gas and record the information obtained.

   b. Certified progress reports will be submitted to the ADEQ on a semi-annual basis detailing the availability of calibration gas, and updated information on the certification progress of the mercury CEMS, if any.

   c. Upon receipt of a procurement date for NIST-traceable mercury calibration gases, the Permittee shall notify ADEQ of the following information:

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(1) The approximate date that mercury calibration gases will be delivered to the facility;

(2) The approximate date for submittal of the Relative Accuracy Test Audit (RATA) protocol; and

(3) The scheduled Hg CEMS RATA performance test date.

II. GENERAL NESHAP REQUIREMENTS

A. Operation and Maintenance Requirements

1. Operation and maintenance requirements established in this permit pursuant to Section 112 of the Clean Air Act are enforceable independent of emissions limitations or other requirements in relevant standards.
[40 CFR 63.6(e)(1)(iii)]

2. The Permittee shall prepare, for each affected source subject to the provisions of 40 CFR 63 Subpart LLL a written operations and maintenance plan. The operations and maintenance plan shall include the following information:
[40 CFR 63.1347(a)]

a. Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits including fugitive dust control measures for open clinker piles under 40 CFR 63 Subpart LLL;
[40 CFR 63.1347(a)(1)

b. Corrective actions to be taken when required by Condition VII.B.4.e of Attachment "C";
[40 CFR 63.1347(a)(2)

c. Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year; and
[40 CFR 63.1347(a)(3)

d. The operation and maintenance plan shall also address periods of startup and shutdown.
[40 CFR 63.1347(a)(1)

3. Failure to comply with any provision of the operations and maintenance plan developed in accordance with this section is a violation of the standard.
[40 CFR 63.1347(b)]

4. *At all times, the Permittee shall operate and* maintain *any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.* Determination of whether such

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operation and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 63.1348(d), and A.A.C. R18-2-331.A.3.b and c]
[Material Permit Conditions are indicated by underlines and italics]

B. General Monitoring Requirements

1. Continuous Monitoring Systems

a. The Permittee shall demonstrate compliance with the monitoring requirements in this Attachment on a continuous basis.

[40 CFR 63.1350(a)(1)]

b. For each existing unit that is equipped with a Continuous Monitoring System (CMS), the Permittee shall maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests.

[40 CFR 63.1350(a)(3]

c. Any instance where the Permittee fails to comply with the continuous monitoring requirements of this Attachment shall be a violation.

[40 CFR 63.1350(a)(4)]

d. The Permittee must monitor and collect data according to 40 CFR 63.1350 and the site-specific monitoring plan required by Condition II.B.5 below.

[40 CFR 63.1348(b)(1)(i)]

e. Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating.

[40 CFR 63.1348(b)(1)(ii)]

f. The Permittee shall not use data recorded during monitoring system malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The Permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

[40 CFR 63.1348(b)(1)(iii)]

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2. Parametric Monitoring Systems

a. *For any operating limitation that requires use of CMS, the Permittee shall install,* operate, and maintain *each continuous parameter monitoring system (CPMS) according to the following procedures:*

[40 CFR 63.1350(m) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

(1) The CPMS shall complete a minimum of one cycle of operation for each successive 15-minute period. The Permittee shall have a minimum of four successive cycles of operation to have a valid hour of data.

(2) The Permittee shall conduct all monitoring in continuous operation at all times that the unit is operating.

(3) The Permittee shall determine the 1-hour block average of all recorded readings.

(4) The Permittee shall record the results of each inspection, calibration, and validation check.

[40 CFR 63.1350(m)(1)-(4)]

b. In addition to the above, the Permittee shall comply with specific parametric requirements under 40 CFR 63.1350(m)(5) through (11), as applicable.

[40 CFR 63.1350(m)]

3. Continuous Flow Rate Monitoring Systems

The Permittee shall install, calibrate, operate and maintain *instruments for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit and that is required to be monitored by a CEMS.*

[40 CFR 63.1350(n) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

a. The Permittee shall install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the mercury CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate.

[40 CFR 63.1350(n)(1)]

b. The flow rate monitoring system shall be designed to measure the exhaust flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a

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value of at least 20 percent greater than the highest expected exhaust flow rate.

[40 CFR 63.1350(n)(2)]

c. The flow rate monitoring system shall be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in Condition II.B.3.b above.

[40 CFR 63.1350(n)(4)]

d. The signal conditioner, wiring, power supply, and data acquisition and recording system for the flow rate monitoring system shall be compatible with the output signal of the flow rate sensors used in the monitoring system.

[40 CFR 63.1350(n)(5)]

e. The flow rate monitoring system shall be designed to complete a minimum of one cycle of operation for each successive 15-minute period.

[40 CFR 63.1350(n)(6)]

f. The flow rate sensor shall have provisions to determine the daily zero and upscale calibration drift (CD) (Refer Sections 3.1 and 8.3 of Performance Specification 2 in Appendix B to 40 CFR Part 60).

(1) Conduct the CD tests at two reference signal levels, zero (e.g., 0 to 20 percent of span) and upscale (e.g., 50 to 70 percent of span).

(2) The absolute value of the difference between the flow monitor response and the reference signal shall be equal to or less than 3 percent of the flow monitor span.

[40 CFR 63.1350(n)(7)(i)-(ii)]

g. The Permittee shall perform an initial relative accuracy test of the flow rate monitoring system according to Section 8.2 of Performance Specification 6 of Appendix B to 40 CFR Part 60 with the following exceptions:

(1) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system.

(2) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data.

[40 CFR 63.1350(n)(8)(i)-(ii)]

h. The Permittee shall verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in Condition II.B.3.g above.

[40 CFR 63.1350(n)(9)]

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i. The Permittee shall operate the flow rate monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

[40 CFR 63.1350(n)(10)]

4. Alternate Monitoring Requirements Approval

The Permittee may submit an application to the EPA Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards subject to the provisions of 40 CFR 63.1350(o)(1) through (6).

[40 CFR 63.1350(o)]

5. Development and Submittal of Monitoring Plans

If the Permittee demonstrates compliance with any applicable emissions limit through performance stack testing or other emissions monitoring, the Permittee shall develop a site-specific monitoring plan according to the requirements in 40 CFR 63.1350(p)(1) – (4). This requirement also applies if the Permittee petitions the EPA Administrator for alternative monitoring parameters under Condition II.B.4 above and 40 CFR 63.8(f).

[40 CFR 63.1350(p)]

C. Startup and Shutdown Requirements

1. The Permittee shall operate all air pollution control devices including during periods of startup and shutdown.

[40 CFR 63.1348(b)(9)]

2. Specific Requirements for Kiln

The Permittee shall meet the following requirements during startup and shutdown of kiln.

[40 CFR 63.1346(g)]

a. During startup the Permittee shall use any one or combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) until the kiln reaches a temperature of 1,200 degrees Fahrenheit.

[40 CFR 63.1346(g)(1)]

b. Combustion of the primary kiln fuel shall commence once the kiln temperature reaches 1,200 degrees Fahrenheit.

[40 CFR 63.1346(g)(2)]

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c. All dry sorbent and activated carbon systems that control hazardous air pollutants shall be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five minute average) during startup. Temperature of the gas stream shall be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown.

[40 CFR 63.1346(g)(3)]

d. The Permittee shall keep records as specified in Section II.G of Attachment "C" during periods of startup and shutdown.

[40 CFR 63.1346(g)(4)]

D. Performance Testing Requirements

1. The Permittee shall demonstrate initial compliance with the emissions standards and operating limits by using the test methods and procedures in this Attachment. The first day of the 30 operating day performance test is the first day after the compliance date following completion of the field testing and data collection that demonstrates that the CPMS or CEMS has satisfied the relevant CPMS performance evaluation or CEMS performance specification (e.g., PS 2, 12A, or 12B) acceptance criteria. The performance test period is complete at the end of the 30th consecutive operating day. The Permittee has the option of performing the compliance test earlier then the compliance date if desired.

[40 CFR 63.1348(a)]

2. Performance tests shall be conducted under such conditions as the Director specifies to the Permittee based on representative performance of the affected source for the period being tested. Upon request, the Permittee shall make available to the Director such records as may be necessary to determine the conditions of performance tests. The Permittee shall make available to the Director prior to testing, if requested, the site-specific test plan to be followed during performance testing.

[40 CFR 63.1349(a) and (e)]

3. Performance test results shall be documented in complete test reports that contain the following information, as well as all other relevant information. The site-specific plan to be followed during performance testing must be made available to the Director prior to testing, if requested.

[40 CFR 63.1349(a)]

a. A brief description of the process and the air pollution control system;

b. Sampling location description(s);

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c. A description of sampling and analytical procedures and any modifications to standard procedures;

d. Test results;

e. Quality assurance procedures and results;

f. Records of operating conditions during the performance test, preparation of standards, and calibration procedures;

g. Raw data sheets for field sampling and field and laboratory analyses;

h. Documentation of calculations;

i. All data recorded and used to establish parameters for monitoring; and

j. Any other information required by the performance test method.

4. Changes in Operations

a. If the Permittee plans to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value, the Permittee shall conduct a performance test as specified in 40 CFR 63.1349(b).

[40 CFR 63.1348(c)(1)]

b. In preparation for and while conducting a performance test, the Permittee may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the following conditions are met. The Permittee shall submit temperature and other monitoring data that are recorded during the pretest operations.

(1) The Permittee shall provide the Director written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart for any source, or as soon as practicable where 60 days advance notice is not feasible. The notice shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test, including when the planned operational change period would begin.

(2) The performance test results shall be documented in a test report according to Condition II.D.3 above.

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(3) A test plan shall be made available to the Director prior to performance testing, if requested.

(4) The performance test shall be completed within 360 hours after the planned operational change period begins.

[40 CFR 63.1348(c)(2)(i)-(iv)]

E. Notification requirements

The Permittee shall comply with the notification requirements in 40 CFR 63.9 as follows:

1. Initial notifications as required by 40 CFR 63.9(b) through (d);

2. Notification of performance tests, as required by 40 CFR 63.7 and 63.9(e);

3. Notification of opacity and visible emission observations required by 40 CFR 63.1349 in accordance with 40 CFR 63.6(h)(5) and 63.9(f);

4. Notification, as required by 40 CFR 63.9(g), of the date that the continuous emission monitor performance evaluation required by 40 CFR 63.8(e) is scheduled to begin;

5. Notification of compliance status, as required by 40 CFR 63.9(h); and

6. Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, the Permittee shall notify the Director of the planned performance tests. The notification requirements of 40 CFR 63.7(b) and 63.9(e) do not apply to retesting required for exceedances under 40 CFR 63 Subpart LLL.

[40 CFR 63.1353(b)]

F. Reporting Requirements

1. The Permittee shall comply with the reporting requirements specified in 40 CFR 63 subpart A as follows:

[40 CFR 63.1354(b)]

a. As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as a part of the notification of compliance status.

[40 CFR 63.1354(b)(1)]

b. As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63 Subpart LLL.

[40 CFR 63.1354(b)(2)]

c. As required by 40 CFR 63.10(d)(4), the Permittee who is required to submit progress reports as a condition of receiving an extension of compliance under 40 CFR 63.6(i) shall submit such reports by the dates specified in the written extension of compliance.

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[40 CFR 63.1354(b)(3)]

d. As required by 40 CFR 63.10(e)(2), the Permittee shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by 40 CFR 63.8(e). The Permittee shall submit the report simultaneously with the results of the performance test.

[40 CFR 63.1354(b)(6)]

e. As required by 40 CFR 63.10(e)(2), the Permittee using a continuous opacity monitoring system to determine opacity compliance during any performance test required under 40 CFR 63.7 and described in 40 CFR 63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under 40 CFR 63.8(e).

[40 CFR 63.1354(b)(7)]

f. As required by 40 CFR 63.10(e)(3), the Permittee equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

[40 CFR 63.1354(b)(8)]

g. The Permittee shall submit a summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). The Permittee shall use the appropriate electronic report in CEDRI. Instead of using the electronic report in CEDRI, the Permittee may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri), once the XML schema is available. If the reporting form is not available in CEDRI at the time that the report is due, the Permittee shall submit the report the EPA Administrator at the appropriate address listed in 40 CFR 63.13. The Permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The excess emissions and summary reports must be submitted no later than 60 days after the end of the reporting period, regardless of the method in which the reports are submitted. The report must contain the information specified in 40 CFR 63.10(e)(3)(vi). In addition, the summary report shall include:

[40 CFR 63.1354(b)(9)]

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(1) All exceedances of maximum control device inlet gas temperature limits specified in Conditions VI.C.2.a and VI.C.2.b of this Attachment;

[40 CFR 63.1354(b)(9)(i)]

(2) Notification of any failure to calibrate thermocouples and other temperature sensors as required under Condition VI.C.3.a(1)(c) of this Attachment;

[40 CFR 63.1354(b)(9)(ii)]

(3) Notification of any failure to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under Condition VI.C.2.c(2) of this Attachment;

[40 CFR 63.1354(b)(9)(iii)]

(4) Notification of failure to conduct any combustion system component inspections conducted within the reporting period as required under Condition II.A.2.c of this Attachment;

[40 CFR 63.1354(b)(9)(iv)]

(5) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with Condition II.A.2 of this Attachment;

[40 CFR 63.1354(b)(9)(v)]

(6) For each PM CPMS, HCl, Hg, and THC CEMS, SO_2 CEMS, or Hg sorbent trap monitoring system, within 60 days after the reporting periods, the Permittee report all of the calculated 30-operating day rolling average values derived from the CPMS, CEMS, CMS, or Hg sorbent trap monitoring systems; and

[40 CFR 63.1354(b)(9)(vi)]

(7) In response to each deviation from an emissions standard or established operating parameter limit, the date, duration and description of each deviation and the specific actions taken for each deviation including inspections, corrective actions and repeat performance tests and the results of those actions.

[40 CFR 63.1354(b)(9)(vii)]

h. If the total continuous monitoring system downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report.

[40 CFR 63.1354(b)(10)]

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i. The Permittee shall submit the information specified in Conditions II.F.1.i(1) and II.F.1.i(2) below no later than 60 days following the initial performance test. All reports must be signed by a responsible official.

(1) The initial performance test data as recorded under Condition II.D.3 above.

[40 CFR 63.1354(b)(11)(i)(A)]

(2) The values for the site-specific operating limits or parameters established pursuant to 40 CFR 63.1349(b)(1), (3), (6), (7), and (8), as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test.

[40 CFR 63.1354(b)(11)(i)(B)]

(3) As of December 31, 2011, and within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR 63.2, conducted to demonstrate compliance with any standard covered, the Permittee shall submit the relative accuracy test audit (RATA) data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically via CEDRI and by using the Electronic Reporting Tool (ERT) (see https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert). For any performance evaluations with no corresponding RATA pollutants listed on the ERT website, the Permittee shall submit the results of the performance evaluation to the EPA Administrator at the appropriate address listed in 40 CFR 63.13.

[40 CFR 63.1354(b)(11)(i)(C)]

j. For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

[40 CFR 63.1354(b)(11)(ii)]

k. All reports required by 40 CFR 63 Subpart LLL not subject to the requirements in Conditions II.F.1.g and II.F.1.i above must be sent to the EPA Administrator at the appropriate address listed in 40 CFR 63.13. The EPA Administrator or ADEQ may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as excel spreadsheet, on CD or hard copy).

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The EPA Administrator retains the right to require submittal of reports subject to Conditions II.F.1.g and II.F.1.i above in paper format.

[40 CFR 63.1354(b)(12)]

2. For each failure to meet a standard or emission limit caused by a malfunction at an affected source, the Permittee shall report the failure in the semiannual compliance report required in Condition II.F.1.g above. The report shall contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report shall list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report shall also include a description of actions taken by the Permittee during a malfunction of an affected source to minimize emissions in accordance with Condition II.A.4 including actions taken to correct a malfunction.

[40 CFR 63.1354(c)]

G. Recordkeeping Requirements

1. The Permittee shall maintain files of all information (including all reports and notifications) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

[40 CFR 63.1355(a)]

2. The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (b)(3); and

   a. All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9;

   b. All records of applicability determination, including supporting analyses; and

   c. If the Permittee has been granted a waiver under 40 CFR 63.8(f)(6), any information demonstrating whether the Permittee is meeting the requirements for a waiver of recordkeeping or reporting requirements.

[40 CFR 63.1355(b)(1)-(3)]

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3. In addition to the recordkeeping requirements in Condition II.G.2 above, the Permittee shall maintain all records required by 40 CFR 63.10(c) for the continuous monitoring systems.

[40 CFR 63.1355(c)]

4. The Permittee shall keep records of the daily clinker production rates according to the clinker production monitoring requirements in 40 CFR 63.1350(d).

[40 CFR 63.1355(e)]

5. The Permittee shall keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period.

[40 CFR 63.1355(f)]

6. The Permittee shall keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.

[40 CFR 63.1355(g)(1)]

7. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with Condition II.A.4 including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.1355(g)(2)]

8. For each exceedance from an emissions standard or established operating parameter limit, the Permittee shall keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions.

[40 CFR 63.1355(h)]

9. The Permittee shall keep records of periods of operations of Clinker Bypass Bin (H2-SB1).

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

H. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with 40 CFR 66.1346(g), 63.1347(a) & (b), 63.1348(a), (b), (c) & (d),63.1349(a),(d) & (e), 63.1350(a), (m), (n), (o) & (p), 63.1353(b), 66.1354(b) & (c), and 63.1355.

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

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III. COAL PREPARATION AND COAL MILL SYSTEMS

A. Applicability

This Section is applicable to process sources identified in Sections XIII and Sections XXI of the Equipment List in Attachment "D".

B. Equipment Subject to Non-NSPS Requirements

1. Applicability

This Subsection is applicable to coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems constructed or modified on or before October 27, 1974

2. Particulate Matter and Opacity

a. Emission Limitations and Standards

(1) The Permittee shall not cause, allow or permit the discharge of particulate matter from the equipment that commenced construction on or before October 27, 1974, and that did not commence modifications after October 27, 1974, into the atmosphere, in any one hour from any coal preparation plant in total quantities in excess of the amounts calculated by one of the following equations:

[P.C.C. 17.16.310.B]

(a) 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:

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

Where:

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

P = the process weight rate in tons per hour.

(b) 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**:**

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

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Where “E” and “P” are defined as in Condition III.B.1.a(1)(a) above.

(2) The Permittee shall not cause or allow to be emitted into the atmosphere from any existing source subject to this Section any gases which exhibit opacity greater than 20 percent as determined by EPA Reference Method 9 in Appendix A to 40 CFR 60.

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

3. Air Pollution Control Requirements

a. *The Permittee shall operate all equipment in a manner consistent with good air pollution control practice for minimizing particulate matter emissions from the process sources subject to this Section.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

b. The Permittee shall control fugitive emissions from process sources subject to this Section in accordance with the methods listed in Condition II.B.1.c of Attachment “B”.

[A.A.C. R18-2-716.E]

4. Monitoring, Recordkeeping and Reporting Requirement

The Permittee shall conduct a Visible Emissions Observation Procedure, as described in Condition II.B.3.b of Attachment “B”, for non-point sources, and fugitive emissions.

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

5. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with P.C.C. 17.16.310.B, A.A.C. R18-2-702.B.1, A.A.C. R18-2-716.E.

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

C. Equipment Subject to NSPS Requirements

1. Applicability

This Subsection is applicable to coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems constructed or modified after October 27, 1974.

[40 CFR 60.250(b)]

2. Particulate Matter and Opacity

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a. Emission Limitations and Standards

(1) The Permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal that was constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater.

[40 CFR 60.254(a)]

(2) For coal processing and conveying equipment, coal storage systems, or coal transfer and loading systems processing coal that were constructed, reconstructed, or modified after April 28, 2008, the Permittee shall meet the requirements in Conditions III.C.2.a(2)(a) and (b), as applicable.

[40 CFR 60.254(b)]

(a) Except as provided in Condition III.C.2.a(2)(c) below, the Permittee shall not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

[40 CFR 60.254(b)(1)]

(b) Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of Condition III.C.2.a(2)(a) above.

[40 CFR 60.254(b)(3)]

3. Air Pollution Control Requirements

a. *At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.* Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[40 CFR 60.11(d), and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated by underlines and italics]

b. *The Permittee shall operate the dust collectors H3-K4-DC1 & H3-K4-DC2 in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment,

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resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-331.A.3.e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

4. Compliance Requirements

a. The Permittee shall conduct all performance tests required by 40 CFR 60.8 to demonstrate compliance with the applicable emission standards using the methods identified in Condition III.C.5.

[40 CFR 60.255(a)]

b. For the equipment constructed or modified after April 28, 2008, the Permittee shall conduct repeat performance tests according to the following requirements:

(1) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

[40 CFR 60.255(b)(2)(i)]

(2) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test shall be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

[40 CFR 60.255(b)(2)(ii)]

c. The Permittee shall prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in Conditions III.C.4.c(1) through III.C.4.c(6) below.

[40 CFR 60.254(c)]

(1) The fugitive coal dust emissions control plan must identify and describe the control measures the Permittee will use to minimize fugitive coal dust emissions from each open storage pile.

[40 CFR 60.254(c)(1)]

(2) For open coal storage piles, the fugitive coal dust emissions control plan must require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when the provisions of Condition III.C.4.c(6) are met), use of a wind barrier, compaction, or use of a vegetative cover. The Permittee

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shall select, for inclusion in the fugitive coal dust emissions control plan, the control measure or measures listed in this condition that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source.

[40 CFR 60.254(c)(2)]

(3) The Permittee may petition the Director to approve, for inclusion in the plan for the affected facility, alternative control measures other than those specified in Condition III.C.4.c(2) as specified in Conditions III.C.4.c(3)(a) through (d).

[40 CFR 60.254(c)(3)]

(a) The petition must include a description of the alternative control measures, a copy of the fugitive coal dust emissions control plan for the affected facility that includes the alternative control measures, and information sufficient for ADEQ to evaluate the demonstrations required by Condition III.C.4.c(3)(b).

[40 CFR 60.254(c)(3)(i)]

(b) The Permittee must either demonstrate that the fugitive coal dust emissions control plan that includes the alternate control measures will provide equivalent overall environmental protection or demonstrate that it is either economically or technically infeasible for the affected facility to use the control measures specifically identified in Condition III.C.4.c(2).

[40 CFR 60.254(c)(3)(ii)]

(c) While the petition is pending, the Permittee must comply with the fugitive coal dust emissions control plan including the alternative control measures submitted with the petition. Operation in accordance with the plan submitted with the petition shall be deemed to constitute compliance with the requirement to operate in accordance with a fugitive coal dust emissions control plan that contains one of the control measures specifically identified in Condition III.C.4.c(2) while the petition is pending.

[40 CFR 60.254(c)(3)(iii)]

(d) If the petition is approved by the Director, the alternative control measures will be approved for inclusion in the fugitive coal dust emissions control plan for the affected facility. In lieu of amending this subpart, a letter will be sent to the Permittee

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describing the specific control measures approved. The Permittee shall make any such letters and the applicable fugitive coal dust emissions control plan available to the public. If the Director determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.
[40 CFR 60.254(c)(3)(iv)]

(4) The Permittee must submit the fugitive coal dust emissions control plan to the Director or ADEQ as specified in Conditions III.C.4.c(4)(a) and (b).
[40 CFR 60.254(c)(4)]

(a) The plan must be submitted to the Director prior to startup of the new, reconstructed, or modified affected facility.
[40 CFR 60.254(c)(4)(i)]

(b) The plan must be revised as needed to reflect any changing conditions at the source. Such revisions must be dated and submitted to the Director before a source can operate pursuant to these revisions. The Director may also object to such revisions as specified in Condition III.C.4.c(5).
[40 CFR 60.254(c)(4)(ii)]

(5) The Director may object to the fugitive coal dust emissions control plan as specified in Condition III.C.4.c(5)(a) and (b).
[40 CFR 60.254(c)(5)]

(a) The Director may object to any fugitive coal dust emissions control plan that it has determined does not meet the requirements of Condition III.C.4.c(4)(a) and (b).
[40 CFR 60.254(c)(5)(i)]

(b) If an objection is raised, the Permittee, within 30 days from receipt of the objection, must submit a revised fugitive coal dust emissions control plan to the Director. The Permittee must operate in accordance with the revised fugitive coal dust emissions control plan. The Director retains the right, under Condition III.C.4.c(5), to object to the revised control plan if it determines the plan does not meet the requirements of Condition III.C.4.c(4)(a) and (b).
[40 CFR 60.254(c)(5)(ii)]

(6) Where appropriate chemical dust suppression agents are selected by the Permittee as a control measure to minimize fugitive coal dust emissions, (1) only chemical dust suppressants with Occupational Safety and Health

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Administration (OSHA)-compliant safety data sheets (SDS) are to be allowed; (2) the SDS must be included in the fugitive coal dust emissions control plan; and (3) the Permittee must consider and document in the fugitive coal dust emissions control plan the site-specific impacts associated with the use of such chemical dust suppressants.

[40 CFR 60.254(c)(6)]

5. Performance Test Requirements

a. The Permittee shall use Method 9 of Appendix A–4 of 40 CFR 60 to determine opacity with the following exceptions.

(1) The duration of the Method 9 performance test shall be 1 hour (ten 6-minute averages).

(2) If, during the initial 30 minutes of the observation of a Method 9 performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.

[40 CFR 60.257(a)(1)(i)-(ii)]

b. To determine opacity for fugitive coal dust emissions sources, the following additional requirements shall be used.

(1) The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.

[40 CFR 60.257(a)(2)(i)]

(2) The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.

[40 CFR 60.257(a)(2)(ii)]

(3) The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.

[40 CFR 60.257(a)(2)(iii)]

c. A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met.

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(1) No more than three emissions points may be read concurrently.

(2) All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(3) If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.

[40 CFR 60.257(a)(3)(i)-(iii)]

6. Recordkeeping and Reporting Requirements

These requirements are applicable for affected facilities constructed or modified after April 28, 2008.

[40 CFR 60.258]

a. The Permittee shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:

(1) The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.

[40 CFR 60.258(a)(1)]

(2) The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.

[40 CFR 60.258(a)(2)]

(3) The amount and type of coal processed each calendar month.

[40 CFR 60.258(a)(3)]

(4) Monthly certification that the fugitive coal dust emissions control plan was implemented as described. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Director providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g. objections, to the plan and any actions relative

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to the alternative control measures, e.g. approvals, shall be noted in the logbook as well.

[40 CFR 60.258(a)(6)]

b. The Permittee shall report semiannually periods of excess emissions (i.e., all 6-minute average opacities that exceed the applicable standard).

[40 CFR 60.258(b)(3)]

c. The Permittee shall submit the results of initial performance tests to the Director.

[40 CFR 60.258(c)]

d. After July 1, 2011, within 60 days after the date of completing each opacity performance tests, the Permittee must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243–01; RTP, NC 27711.

[40 CFR 60.258(d)]

7. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 60.254(a) & (b), 60.255(a) & (b)(2), 60.257(a)(1) through (3), and 60.258.

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

D. NESHAP Requirements under 40 CFR 63 Subpart LLL

1. Emission Standards

The Permittee shall not cause to be discharged into the atmosphere from any conveying system transfer point from any coal mill to the kiln any gases which exhibit greater than 10 percent opacity.

[40 CFR 63.1340(b)(7) and 40 CFR 63.1348]

2. Opacity Monitoring Requirements

The Permittee shall conduct required opacity monitoring in accordance with the provisions of Conditions III.D.2.a through III.D.2.g below and in accordance with the monitoring plan developed under Condition II.B.5 of Attachment “C”.

[40 CFR 63.1350(f)(1)]

a. The Permittee shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A–7 to 40 CFR 60. The performance test must be conducted while the affected source is in operation.

[40 CFR 63.1350(f)(1)(i)]

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b. If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of performance testing from monthly to semiannually for that affected source. If visible emissions are observed during any semiannual test, the Permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

[40 CFR 63.1350(f)(1)(ii)]

c. If no visible emissions are observed during the semiannual test for any affected source, the Permittee may decrease the frequency of performance testing from semiannually to annually for that affected source. If visible emissions are observed during any annual performance test, the Permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

[40 CFR 63.1350(f)(1)(iii)]

d. If visible emissions are observed during any Method 22 performance test, the Permittee shall conduct 30 minutes of opacity observations, recorded at 15-second interval in accordance with Method 9 of Appendix A–4 to 40 CFR 60. The Method 9 performance test shall begin within 1 hour of any observation of visible emissions.

[40 CFR 63.1350(f)(1)(iv)]

e. The requirements to conduct Method 22 visible emissions monitoring do not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

[40 CFR 63.1350(f)(1)(v)]

f. If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall conduct a Method 22 performance test according to the requirements of Conditions III.D.2.a and III.D.2.d above for each such conveying system transfer point located within the building, or for the building itself, according to Condition III.D.2.g below.

[40 CFR 63.1350(f)(1)(vi)]

g. If visible emissions from a building are monitored, the requirements of Conditions III.D.2.a and III.D.2.d above apply to the monitoring of the building, and, the Permittee must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

[40 CFR 63.1350(f)(1)(vii)]

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3. Performance Test Requirements

a. For the dust collectors H3-K4-DC1 & -DC2, to demonstrate compliance with the opacity standard, the Permittee shall conduct performance test once per permit term in accordance with EPA Reference Method 9 of 40 CFR Part 60, Appendix A.

[40 CFR 63.1349(b)(2)]

b. The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the opacity standard.

[40 CFR 63.1349(b)(2)]

c. The duration of the Method 9 performance test shall be 3 hours (thirty 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if following Conditions are met:

(1) There are no individual readings greater than 10 percent opacity;

(2) There are no more than three readings of 10 percent for the first 1-hour period.

[40 CFR 63.1349(b)(2)(i)-(ii)]

4. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 63.1340(b)(7), 63.1348, 63.1349(b)(2), and 63.1350(f)(1).

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

IV. OPEN CLINKER PILES

A. Standards for Open Clinker Piles

The Permittee shall operate an open clinker pile in accordance with the fugitive dust emissions control measures that are appropriate for the site conditions and described in the operation and maintenance plan under Condition II.A.2 of Attachment “C”.

[40 CFR 63.1343(c)]

B. Requirements for Operation and Maintenance Plan

1. The operations and maintenance plan shall describe the measures the Permittee will use to minimize fugitive dust emissions from piles of clinkers, such as accidental spillage, that are not part of open clinker storage piles.

[40 CFR 63.1343(c)]

2. The operation and maintenance plan shall identify and describe the location of each current or future open clinker storage pile and the fugitive

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dust emissions control measures the Permittee shall use to minimize fugitive dust emissions from each open clinker storage pile.

[40 CFR 63.1343(c)(1)]

3. For open clinker storage piles, the operations and maintenance plan shall specify that one or more of the following control measures will be used to minimize to the greatest extent practicable fugitive dust from open clinker storage piles:

[40 CFR 63.1343(c)(2)]

a. Locating the source inside a partial enclosure;

b. Installing and operating a water spray or fogging system;

c. Applying appropriate chemical dust suppression agents; and

d. Use of a wind barrier, compaction, use of tarpaulin or other effective cover, or use of a vegetative cover.

4. The Permittee shall select, for inclusion in the operations and maintenance plan, the fugitive dust control measure or measures listed above that are most appropriate for site conditions. The plan shall also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan shall be revised as needed to reflect any changing conditions at the source.

[40 CFR 63.1343(c)(2)]

5. Temporary piles of clinker that result from accidental spillage or clinker storage cleaning operations shall be cleaned up within 3 days.

[40 CFR 63.1343(c)(3)]

C. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with 40 CFR 1343(c).

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

V. CLINKER PRODUCTION

A. Monitoring Requirements

The Permittee shall determine hourly clinker production by one of following two methods:

1. *The Permittee shall install, calibrate,* maintain, and operate *a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ±5 percent accuracy.*

[40 CFR 63.1350(d)(1)(i) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

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2. *The Permittee shall install, calibrate*, maintain, and operate *a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed shall be maintained within ±5 percent accuracy.* The Permittee shall calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. The Permittee shall update this ratio monthly. If this ratio changes at clinker reconciliation, the Permittee shall use the new ratio going forward, but the Permittee shall not have to retroactively change clinker production rates previously estimated.

[40 CFR 63.1350(d)(1)(ii) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

B. Recordkeeping Requirements

1. During each quarter of the operation, the Permittee shall determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production or feed mass flow rates.

[40 CFR 63.1350(d)(2)]

2. The Permittee shall maintain records of hourly kiln feed rates and hourly clinker production rates.

[40 CFR 63.1348(b)(1)(iv) and 40 CFR 63.1350(d)(3)]

3. The Permittee shall keep records of the daily clinker production rates and kiln feed rates.

[40 CFR 63.1355(e)]

C. Permit Shield

Compliance with the Conditions of this Section shall be deemed compliance with 40 CFR 63.1348(b)(1), 63.1350(d)(1) through (3), and 63.1355(e).

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

VI. KILNS AND CLINKER COOLERS

A. This Section is applicable to the process sources identified in Section XI, XII, XIII and XIV of the Equipment List in Attachment “D”.

B. Particulate Matter and Opacity

1. Emission Standards

a. Kilns:

(1) The Permittee shall not cause to be discharged into the atmosphere from any kiln any gases which contain particulate matter in excess of 0.07 pounds per ton clinker.

[40 CFR 63.1343(b)(1), 40 CFR 63.1356 and 40 CFR 60.62(d)]

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(2) The Permittee shall not cause, allow or permit the discharge of particulate matter from Kilns 1, 2, and 3 to exceed the amounts calculated by one of the following equations:
[A.A.C R18-2-705.B]

(a) 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:

$E = 4.10\ P^{0.67}$

Where:

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

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

(b) 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:

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

Where "E" and "P" are defined as indicated in Condition VI.B.1.a(2)(a) above.

(3) The Permittee shall not cause to be discharged into the atmosphere from Kilns 1, 2, and 3 any gases which exhibit opacity greater than 20 percent.
[A.A.C R18-2-705.C]

(4) The Permittee shall not cause to be discharged into the atmosphere from Dust Collector H5-5-GB for Kilns 1, 2 and 3, and H5-GB for in-line kiln/raw mill Kiln 4 any gases which contain PM_{10} in excess of 0.008 gr/dscf.
[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VI.C]

b. Clinker Coolers:

(1) The Permittee shall not cause to be discharged into the atmosphere from any clinker cooler, any gases which contain particulate matter in excess of 0.07 pounds per ton clinker.
[40 CFR 63.1343(b)(1), 40 CFR 63.1356 and 40 CFR 60.62(d)]

(2) The Permittee shall not cause, allow or permit the discharge of particulate matter from the clinker coolers for Kilns 1, 2,

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and 3 to exceed the amounts calculated by the equations in Condition VI.B.1.a(2) above.

[A.A.C R18-2-705.B]

(3) The Permittee shall not cause to be discharged into the atmosphere from the clinker coolers for Kilns 1, 2, and 3 any gases which exhibit opacity greater than 20 percent.

[A.A.C R18-2-705.C]

2. Air Pollution Control Requirements

a. *At all times, including periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain all the Dust Collectors H5-5-GB for Kilns 1-3, and H5-GB for Kiln 4 in-line kiln/ raw mill in a manner consistent with good air pollution control practice for minimizing PM and PM_{10} emissions.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

b. *At all times including periods of startup, shutdown, and malfunction, the Permittee shall, maintain and operate Dust Collectors H2-1-DC when Clinker Cooler 1 is in operation, H2-2-DC when Clinker Cooler 2 is in operation, H2-3-DC when Clinker Cooler 3 is in operation, and H2-GB when Clinker Cooler 4 is in operation in a manner consistent with good air pollution control practice for minimizing PM and PM_{10} emissions.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

3. Monitoring Requirements

a. Particulate Matter

(1) *The Permittee shall install,* operate, *calibrate,* and maintain *PM CPMS on the Kiln 1-3 stack, Kiln 4 in-line kiln/ raw mill stack, and Clinker Coolers 1, 2, 3 and 4 stacks to demonstrate continuous compliance with the established operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit.*

[40 CFR 63.1349(b)(1)(i), 40 CFR 63.1350(b)(1)(i) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

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(a) The PM CPMS shall provide a 4-20 milliamp output or digital signal output and the establishment of its relationship to the manual reference method measurements shall be determined in units of milliamps or the monitors digital equivalent.
[40 CFR 63.1349(b)(1)(i)(A)]

(b) The PM CPMS operating range shall be capable of reading PM concentrations from zero to a level equivalent to three times the Permittee's allowable emission limit. If the PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument shall be capable of reading PM concentration from zero to a level equivalent to three times the Permittee's allowable emission limit.
[40 CFR 63.1349(b)(1)(i)(B)]

(c) During the initial or subsequent performance tests to demonstrate compliance with the PM limits, the Permittee shall record and average all milliamp or digital output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all the PM CPMS output values for three corresponding 2-hour Method 5 or Method 5I test runs).
[40 CFR 63.1349(b)(1)(i)(C)]

(2) To determine continuous compliance, the Permittee shall use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The Permittee shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps or the digital equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. The Permittee shall use equation 7 in 40 CFR 63.1349(b)(1)(v) to calculate 30 kiln operating day average.
[40 CFR 63.1349(b)(1)(v) and 40 CFR 63.1350(b)(1)(ii)]

(3) For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the Permittee shall:
[40 CFR 63.1350(b)(1)(iii)]

(a) Within 48 hours of the exceedance, visually inspect the affected pollution control device (APCD);
[40 CFR 63.1350(b)(1)(iii)(A)]

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(b) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

[40 CFR 63.1350(b)(1)(iii)(B)]

(c) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. The Permittee are not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required.

[40 CFR 63.1350(b)(1)(iii)(C)]

(4) PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of 40 CFR 63 Subpart LLL.

[40 CFR 63.1350(b)(1)(iv)]

b. Opacity Monitoring Requirements

To demonstrate continuous compliance with the opacity standards in Conditions VI.B.1.a for kilns and VI.B.1.b for clinker coolers,

(1) The Permittee shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A–7 to 40 CFR 60. The performance test must be conducted while the affected source is in operation.

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

(2) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of performance testing from monthly to semiannually for that affected source. If visible emissions are observed during any semiannual test, the Permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

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

(3) If no visible emissions are observed during the semiannual test for any affected source, the Permittee may decrease the frequency of performance testing from semiannually to

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annually for that affected source. If visible emissions are observed during any annual performance test, the Permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

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

(4) If visible emissions are observed during any Method 22 performance test, the Permittee shall conduct 30 minutes of opacity observations, recorded at 15-second interval in accordance with Method 9 of Appendix A–4 to 40 CFR 60. The Method 9 performance test shall begin within 1 hour of any observation of visible emissions.

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

4. Performance Test Requirements

a. Particulate Matter

(1) The Permittee shall demonstrate initial compliance with the PM emissions standards in Conditions VI.B.1.a(1) and VI.B.1.b(1) by conducting a performance test on the Kiln 1-3 stack, Kiln 4 in-line kiln/ raw mill stack, and Clinker Coolers stacks using EPA Reference Method 5 or Method 5I at Appendix A-3 to 40 CFR Part 63.

[40 CFR 63.1348(a)(1) and 40 CFR 63.1349(b)(1)]

(2) For Kiln 4 in-line kiln/ raw mill, the Permittee shall demonstrate initial compliance by conducting separate performance tests while the raw mill is under normal operating conditions and while the raw mill is not operating and calculate the time weighted average emissions. The operating limit will then be determined using Condition VI.B.4.a(3) below.

[40 CFR 63.1349(b)(1)(ix)]

(3) During the initial or subsequent performance tests, the Permittee shall establish the operating limit for the PM CPMS for each stack in accordance with following procedures.

[40 CFR 63.1349(b)(1)(ii)]

(a) If the average of the three EPA Reference Method 5 or 5I compliance test runs is below 75 percent of the PM emission limit, the Permittee shall calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the

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EPA Reference Method 5 or 5I compliance test with the procedures in 40 CFR 63.1349(b)(1)(iii)(A) through (D).

[40 CFR 63.1349(b)(1)(iii)]

(b) If the average of the three PM compliance test runs is at or above 75 percent of the PM emission limit, The Permittee shall determine the operating limit by averaging the PM CPMS milliamp output corresponding to the three PM performance test runs that demonstrate compliance with the emission limit using Equation 6 in 40 CFR 63.1349(b)(1)(iv).

[40 CFR 63.1349(b)(1)(iv)]

(4) The Permittee shall repeat the performance tests at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. The Permittee shall also repeat the test if there is a change the analytical range of the instrument, or if the instrument or any principle analytical component of the instrument, that would alter the relationship of output signal to in-stack PM concentration, is replaced.

[40 CFR 63.1350(b)(1)(i), 40 CFR 63.1349(b)(1)(i)]

(5) For each performance test, the Permittee shall conduct at least three separate test runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. For each test run, the Permittee shall collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. The Permittee shall calculate the time weighted average of the results from three consecutive runs. The Permittee need not determine the particulate matter collected in the impingers "back half" of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes. For kilns with inline raw mills, testing must be conducted while the raw mill is on and while the raw mill is off. If the exhaust streams of a kiln with an inline raw mill and a clinker cooler are comingled, then the comingled exhaust stream must be tested with the raw mill on and the raw mill off.

[40 CFR 63.1349(b)(1)(vi)]

(6) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report shall also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical

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principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value or digital equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run.

[40 CFR 63.1349(b)(1)(vii)]

(7) The Permittee shall conduct performance tests annually for dust collectors H5-5-GB and H5-GB to determine compliance with the PM_{10} emission limit in Condition VI.B.1.a(4) of this Attachment in accordance with EPA Reference Method 5 or Method 201A.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VI.D]

5. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 A.A.C R18-2-705.B, A.A.C R18-2-705.C, 40 CFR 60.62(a)(1)(i) and (ii), 60.62(a)(2), 63.1343(b)(1), 63.1348(a)(1), 63.1349(b)(1), 63.1350(b)(1), 63.1350(n) and Consent Decree 4:10-CV-00573-DCB.

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

C. Dioxins and Furan Requirements

1. Emission Standards

The Permittee shall not cause to be discharged into the atmosphere from any kiln any gases which contain dioxins and furans (D/F) in excess of 0.2 ng/dscm TEQ*, measured on dry basis and corrected to 7% oxygen. If the average temperature at the inlet to the first particulate matter control device during the D/F performance test is 400 °F or less, the D/F emissions limit shall not exceed 0.4 ng/dscm (TEQ).

[40 CFR 63.1343(a) and 40 CFR 63.1343(b)(1)]

*TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

2. Operating Limitations

a. The Permittee shall operate Kilns 1-3 such that the temperature of the gas at the inlet to the PM control device (PMCD), does not exceed the applicable temperature limit determined in accordance with Condition VI.C.4.a(4) of this Attachment and established during the performance test.

[40 CFR 63.1346(a) and 40 CFR 63.1346(b)]

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b. The Permittee shall operate Kiln 4 in-line kiln/ raw mill such that:

(1) When In-Line Raw Mill is operating, the flue temperature at the inlet to the PMCD shall not exceed the applicable exhaust temperature limit determined in accordance with Condition VI.C.4.a(4) of this Attachment and established during the performance test when the raw mill was operating, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent

[40 CFR 63.1346(a)(1)]

(2) When In-Line Raw Mill is not operating, the flue temperature at the inlet to PMCD shall not exceed the applicable exhaust temperature limit determined in accordance with Condition VI.C.4.a(4) of this Attachment and established during the performance test when the raw mill was not operating, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.

[40 CFR 63.1346(a)(2)]

c. If the Permittee employs sorbent injection as an emission control technique for D/F control, the Permittee shall operate the sorbent injection system in accordance with the following Conditions:

[40 CFR 63.1346(c)]

(1) The rolling three-hour average activated sorbent injection rate must be equal to or greater than the sorbent injection rate determined in accordance with Condition VI.C.4.b(1) of this Attachment.

[40 CFR 63.1346(c)(1)]

(2) The Permittee shall:

(a) Either maintain the minimum activated carbon injection carrier gas flow rate, as a rolling three-hour rolling average, based on the manufacturer's specifications. These specifications shall be documented in the test plan developed in accordance with 40 CFR 63.7(c),

[40 CFR 63.1346(c)(2)(i)]

(b) Or, maintain the minimum activated carbon injection carrier gas pressure drop, as a rolling three-hour rolling average, based on the manufacturer's specifications. These specifications shall be documented in the test plan developed in accordance with 40 CFR 63.7(c).

[40 CFR 63.1346(c)(2)(i)]

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d. Except as provided in Condition VI.C.2.e below, the Permittee shall specify and use the brand and type of sorbent used during the performance test until a subsequent performance test is conducted, unless the site-specific performance test plan contains documentation of key parameters that affect adsorption and the Permittee establishes limits based on those parameters, and the limits on these parameters are maintained.

[40 CFR 63.1346(d)]

e. The Permittee may substitute, at any time, a different brand or type of sorbent provided that the replacement has equivalent or improved properties compared to the sorbent specified in the site-specific performance test plan and used in the performance test. The Permittee shall maintain documentation that the substitute sorbent will provide the same or better level of control as the original sorbent.

[40 CFR 63.1346(e)]

3. Monitoring Requirements

a. Temperature Monitoring Requirements

(1) *The Permittee shall calibrate, maintain, and operate a continuous monitoring system (CMS) to record the temperatures of the exhaust gases from Kilns 1-3, and Kiln 4 in-line kiln/ raw mill at the inlet to, or upstream of, PM control devices.*

[40 CFR 63.1348(b)(4), 40 CFR 63.1350(g)(1) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

(a) The temperature recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in Condition VI.C.4.a(4) of this Attachment.

[40 CFR 63.1350(g)(1)(i)]

(b) The calibration reference for the temperature measurement shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the EPA Administrator.

[40 CFR 63.1350(g)(1)(ii)]

(c) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

[40 CFR 63.1350(g)(1)(iii)]

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(2) The Permittee shall monitor and continuously record the temperature of the exhaust gases from the Kilns 1-3 or Kiln 4 in-line kiln/ raw mill at the inlet to the PMCDs.
[40 CFR 63.1350(g)(2)]

(3) The required minimum data collection frequency shall be one minute.
[40 CFR 63.1350(g)(3)]

(4) Every hour, the Permittee shall record the calculated rolling three-hour average temperature using the average of 180 successive one-minute average temperatures.
[40 CFR 63.1350(g)(4)]

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on or from on to off, the calculation of the three-hour rolling average temperature shall begin anew, without considering previous recordings.
[40 CFR 63.1350(g)(5)]

b. Additional Monitoring Requirements When Using Sorbent Injection for D/F Control

(1) Monitoring of Activated Carbon Injection Rate

The Permittee shall install, calibrate, operate and maintain *a continuous monitor to record the rate of activated carbon injection in accordance with the requirements below). The accuracy of the rate measurement device must be ±1 percent of the rate being measured.*
[40 CFR 63.1350(h)(1) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

(a) The Permittee shall locate the device in a position(s) that provides a representative measurement of the total sorbent injection rate.
[40 CFR 63.1350(m)(9)(i)]

(b) The Permittee shall install and calibrate the device in accordance with manufacturer's procedures and specifications.
[40 CFR 63.1350(m)(9)(ii)]

(c) The Permittee shall, at least annually, calibrate the device in accordance with the manufacturer's procedures and specifications.
[40 CFR 63.1350(m)(9)(iii)]

(d) The Permittee shall verify the calibration of the device at least once every three months.
[40 CFR 63.1350(h)(1)(i)]

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(e) Each hour, the Permittee shall calculate the three-hour rolling average activated carbon injection rate for the previous three hours of process operation.
[40 CFR 63.1350(h)(1)(ii)]

(f) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on or from on to off, the calculation of the three-hour rolling average activated carbon injection rate shall begin anew, without considering previous recordings.
[40 CFR 63.1350(h)(1)(iii)]

(2) Monitoring of Carrier Gas Parameter

(a) *The Permittee shall install, calibrate,* operate and maintain *a continuous monitor to record the activated carbon injection system carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) established during the D/F performance test in accordance with Condition VI.C.4.a of this Attachment.*
[40 CFR 63.1350(h)(2)(i) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

(b) If the carrier gas flow rate is used, the Permittee shall determine, record, and maintain a record of the accuracy of the carrier gas flow rate monitoring system according to the procedures in Appendix A to 40 CFR 75.
[40 CFR 63.1349(b)(3)(v)(C)]

(c) If the carrier gas pressure drop is used, determine, record, and maintain a record of the accuracy of the carrier gas pressure drop monitoring system according to the following procedures. The Permittee shall:
[40 CFR 63.1349(b)(3)(v)(C)]

(i) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure.
[40 CFR 63.1350(m)(6)(i)]

(ii) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.
[40 CFR 63.1350(m)(6)(ii)]

(iii) Use a gauge with a minimum tolerance of 1.27 centimeters of water or a transducer

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with a minimum tolerance of 1 percent of the pressure range.
[40 CFR 63.1350(m)(6)(iii)]

(iv) Check pressure tap pluggage daily.
[40 CFR 63.1350(m)(6)(iv)]

(v) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.
[40 CFR 63.1350(m)(6)(v)]

(vi) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.
[40 CFR 63.1350(m)(6)(vi)]

(d) The Permittee shall calculate each hour the 3-hour rolling average of the selected parameter value for the previous 3 hours of process operation using all of the one-minute data available (i.e., the CMS is not out-of-control.)
[40 CFR 63.1350(h)(2)(ii)]

4. Performance Test Requirements

a. The Permittee shall conduct performance tests on the kilns using Method 23 of Appendix A-7 to 40 CFR 60. For Kiln 4 in-line kiln/ raw mill, the Permittee shall conduct a performance test when the raw mill of the in-line kiln/raw mill is operating or not operating.
[40 CFR 63.1349(b)(3)]

(1) Each performance test shall consist of three separate runs conducted under representative conditions. The duration of each run shall be at least 3 hours, and the sample volume for each run must be at least 2.5 dscm (90 dscf).
[40 CFR 63.1349(b)(3)(i)]

(2) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD shall be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) shall be included in the performance test report.
[40 CFR 63.1349(b)(3)(ii)]

(3) Average temperatures shall be calculated for each run of the performance test.
[40 CFR 63.1349(b)(3)(iii)]

(4) The run average temperature shall be calculated for each run, and the average of the run average temperatures shall be determined and included in the performance test report

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and shall determine the applicable temperature limits in Conditions VI.C.2.a and VI.C.2.b of this Attachment.
[40 CFR 63.1349(b)(3)(iv)]

b. Additional Requirements for Sorbent Injection

(1) If sorbent injection is used for D/F control, the Permittee shall record the rate of sorbent injection to the kiln exhaust continuously during the period of the Method 23 test in accordance with Conditions VI.C.3.b(1)(a) through VI.C.3.b(1)(c) above, and include the continuous injection rate record(s) in the performance test report. The Permittee shall calculate the run average sorbent injection rate for each run. The Permittee shall determine the applicable injection rate limit by calculating the average of the three run average injection rates. The Permittee shall include the run average sorbent injection rate for each run, and the average of 3 test runs in the performance test report.
[40 CFR 63.1349(b)(3)(v)(A), 40 CFR 63.1349(b)(3)(vi) and 40 CFR 63.1350(m)(9)]

(2) The Permittee shall include the brand and type of sorbent used during the performance test in the performance test report.
[40 CFR 63.1349(b)(3)(v)(B)]

(3) The Permittee shall maintain a continuous record of the carrier gas parameter (flow rate or pressure drop) for the duration of the performance test. The Permittee shall develop the carrier gas parameter during the initial performance test and update during any subsequent performance test.
[40 CFR 63.1349(b)(3)(v)(C) and 40 CFR 63.1350(m)(6)]

c. The Permittee shall repeat the performance test between 24 and 31 calendar months after the previous performance test.
[40 CFR 63.1349(c)]

5. Compliance Requirements

a. The Permittee shall demonstrate initial compliance with the D/F emissions standards by using the performance test methods and procedures in Condition VI.C.4.a of this Attachment. The Permittee shall determine the D/F TEQ concentration for each run and calculate the arithmetic average of the TEQ concentrations measured for the three runs to determine continuous compliance.
[40 CFR 63.1348(a)(3)(i)]

b. For Kiln 4, the Permittee shall demonstrate initial compliance with the D/F emissions standards by using the performance test methods and procedures in Condition VI.C.4.a of this Attachment,

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and by conducting separate performance tests while the raw mill is operating and the raw mill is not operating.

[40 CFR 63.1348(a)(3)(i)]

c. The Permittee shall demonstrate continuous compliance with the temperature operating limits specified in Conditions VI.C.2.a and VI.C.2.b by using the performance test methods and procedures in Conditions VI.C.4.a(2) through VI.C.4.a(4) of this Attachment. The Permittee shall use the arithmetic average of the temperatures measured during the three runs to determine the applicable temperature limit.

[40 CFR 63.1348(a)(3)(ii)]

d. If activated carbon injection is used, the Permittee shall demonstrate compliance with the activated carbon injection rate operating limits specified in Condition VI.C.2.c by using the performance test methods and procedures in Condition VI.C.4.b(1) of this Attachment.

[40 CFR 63.1348(a)(3)(iii)]

e. If activated carbon injection is used, the Permittee shall also develop a carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) during the initial performance test and updated during any subsequent performance test conducted under Condition VI.C.4.a that meets the requirements of Condition VI.C.4.b(3). The Permittee shall demonstrate compliance with the carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) by maintaining it within ± 5 percent of the value established during the performance test.

[40 CFR 63.1348(a)(3)(iv)]

6. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 63.1343(a), (a)(1) & (a)(2), 63.1343(b)(1), 63.1346(b) 63.1346(c)(1) & (2), 63.1346(d), 63.1346(e), 63.1348(a)(3), 63.1349(b)(3) & (8), 63.1350(g), 63.1350(h)(1), 63.1350(h)(2), and 63.1350(m)(6) & (9).

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

D. THC Requirements

1. Emission Standards

The Permittee shall not cause to be discharged into the atmosphere from Kiln 1-3 stack, and Kiln 4 in-line kiln/ raw mill stack any gases which contain THC more than 24 ppmvd, measured as propane. THC emission limit is on dry basis, corrected to 7% oxygen, and based on rolling 30-day average. The Permittee may elect to meet an alternative limit of 12 ppmvd for total organic HAP.

[40 CFR 63.1343(a), 40 CFR 63.1343(b)(1)]

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Total organic HAP means the sum of the concentrations of compounds of formaldehyde, benzene, toluene, styrene, m-xylene, p-xylene, o-xylene, acetaldehyde, and naphthalene as measured by EPA Test Method 320 or Method 18 of Appendix A to 40 CFR 63 or ASTM D6348-03 or a combination of these methods, as appropriate. If measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), the Permittee must use the method detection level as the measured emissions level for that pollutant in calculating the total organic HAP value. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 18 fractions) may include a combination of method detection level data and analytical data reported above the method detection level.

2. Monitoring Requirements

a. *The Permittee shall, install,* operate, and maintain *THC continuous emission monitoring systems (CEMS) on the following stacks in accordance with Performance Specification 8 or Performance Specification 8A of Appendix B to 40 CFR Part 60. The CEMS shall comply with all of the requirements for continuous monitoring systems in 40 CFR 63 Subpart A. The Permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of Appendix F in 40 CFR Part 60.* For THC continuous emission monitoring systems certified under Performance Specification 8A, the Permittee shall conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in Appendix A to 40 CFR part 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2.

[40 CFR 63.1350(i)(1) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

(1) Kilns 1-3 stack H5-5-GB; and

(2) Kiln 4 in-line kiln/ raw mill Stack H5-GB.

b. For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 ppmvd and the reference method (RM) is Method 25A of Appendix A to 40 CFR Part 60.

[40 CFR 63.1349(b)(4)(i)]

c. The THC CEMS measurement scale shall be capable of reading THC concentrations from zero to a level equivalent to two times the highest THC emissions average determined during the performance test, including mill on or mill off operation.

[40 CFR 63.1349(b)(7)(vi)]

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d. If complying with the total organic HAP emissions limits, the Permittee shall continuously monitor THC according to Condition VI.D.2.a or in accordance with Performance Specification 8 or Performance Specification 8A of Appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, Subpart A. The Permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in Part 60. The Permittee shall develop an emissions monitoring plan in accordance with Condition II.B.5 above.

[40 CFR 63.1350(j)]

3. Performance Test Requirements

a. THC

(1) The Permittee shall use the THC CEMS in Condition VI.D.2.a of this Attachment for initial performance test. The Permittee shall use the average THC concentration obtained during the first 30 kiln operating days of kiln operation after the compliance date of September 9, 2015.

[40 CFR 63.1349(b)(4)(ii)]

(2) For Kiln 4, the Permittee shall conduct separate performance tests while the raw mill is operating ("mill on") and while the raw mill is not operating ("mill off"). Using the fraction of time the raw mill is on and the fraction of time that the raw mill is off, the Permittee shall calculate this limit as a weighted average of the THC levels measured during raw mill on and raw mill off compliance testing with the following equation:

[40 CFR 63.1349(b)(7)(x)]

$$R = (y * t) + (x * (1 - t))$$

Where:

R = Operating limit as THC, ppmvw.

y = Average THC CEMS value during mill on operations, ppmvw.

t = Percentage of operating time with mill on.

x = Average THC CEMS value during mill off operations, ppmvw.

(1- t) = Percentage of operating time with mill off.

b. Total Organic HAPs

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If the Permittee chooses to comply with total HAPs emission limit in lieu of the THC emission limit, the Permittee shall demonstrate compliance by conducting a performance test to determine total organic HAP emissions by following the procedures.

[40 CFR 63.1349(b)(4)(v) and 63.1349(b)(7)]

(1) The Permittee shall use Method 320 of Appendix A to 40 CFR Part 63, Method 18 of Appendix A of 40 CFR Part 60, ASTM D6348–03 or a combination to determine emissions of total organic HAP. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. For the Kiln 4 in-line kiln/raw mill the Permittee shall conduct three separate test runs with the raw mill on, and three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off. Each run shall be conducted for at least 1 hour. The Permittee shall conduct each Method 18 test run to collect a minimum target sample equivalent to three times the method detection limit. The Permittee shall calculate the average of the results from three runs to determine compliance.

[40 CFR 63.1349(b)(7)(i) and (xii)]

(2) At the same time of conducting the performance test for total organic HAP, The Permittee shall also determine a site-specific THC emissions limit by operating a THC CEMS in accordance with the requirements of Condition VI.D.2.d. The duration of the performance test shall be at least 3 hours and the average THC concentration (as calculated from the recorder output) during the 3-hour test shall be calculated. The Permittee shall establish the THC operating limit and determine compliance with it according to Condition VI.D.3.b(3). The Permittee may extend the testing time of the organic HAP performance test, if required, to adequately capture HAP and/or THC variability over time.

[40 CFR 63.1349(b)(7)(ii)]

(3) The Permittee shall determine the operating limit in accordance with the procedures in 40 CFR 63.1349(b)(7)(viii) and (ix). If the organic HAP performance test demonstrates that the average organic HAP emission levels are below 75 percent of the emission limit (9 ppmv) the Permittee shall will use the average THC value recorded during the organic HAP performance test, and the average total organic HAP result of the performance test to establish the operating limit. If the organic HAP compliance test results demonstrate that the average organic HAP emission levels are at or above 75 percent of the emission limit, the operating limit is established as the average THC value

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recorded during the organic HAP performance test. The Permittee must establish a new operating limit after each performance test. The Permittee shall repeat the performance test no later than 30 months following the last performance test and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

[40 CFR 63.1349(b)(7)(vii)]

(4) If the organic HAP emissions are below 75 percent of the organic HAP standard and the Permittee determines the operating limit with Condition VI.D.3.b(3) above, the THC CEMS must be calibrated and operated on a measurement scale no greater than 180 ppmvw, as carbon, or 60 ppmvw as propane.

[40 CFR 63.1349(b)(7)(viii)]

c. If the THC level exceeds by 10 percent or more the site-specific THC emissions limit, the Permittee shall

[40 CFR 63.1349(b)(7)(xiii)]

(1) As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the THC CEMS measurements to within the established value; and

[40 CFR 63.1349(b)(7)(xiii)(A)]

(2) Within 90 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct another performance test to determine compliance with the organic HAP limit and to verify or re-establish the site-specific THC emissions limit.

[40 CFR 63.1349(b)(7)(xiii)(B)]

d. If the Permittee chooses to comply with organic HAPs emission limit, The Permittee shall repeat the performance test between 29 and 31 calendar months after the previous performance test.

[40 CFR 63.1349(c)]

4. Compliance Requirements

a. THC

(1) The Permittee shall use the THC CEMS in Condition VI.D.2.a of this Attachment to demonstrate initial compliance with THC emission standard. The Permittee shall use the average THC concentration obtained during the first 30 kiln operating days of kiln operation after the compliance date of September 9, 2015.

[40 CFR 63.1348(a)(4)(i) and 40 CFR 63.1349(b)(4)(ii)]

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(2) To determine continuous compliance with the THC operating limit, the Permittee shall record the THC CEMS output data for all periods when the process is operating and the THC CEMS is not out-of-control. The Permittee shall demonstrate continuous compliance by using all quality-assured hourly average data collected by the THC CEMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (ppmvw) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. The Permittee shall use Equation 16 to determine the 30-kiln operating day average.

[40 CFR 63.1349(b)(7)(xi)]

$$30 - \text{Kiln operating day average} = \frac{\sum_{i=1}^{n} H_{pvi}}{n}$$

Where:

H_{pvi} = The hourly parameter value for hour i, ppmvw.

n = The number of valid hourly parameter values collected over 30-kiln operating days.

b. HAPs

(1) If the Permittee elects to demonstrate compliance with the total organic HAP emissions limit in lieu of the THC emissions limit, the Permittee shall demonstrate compliance with the total organic HAP emissions standards by using the performance test methods and procedures in Condition VI.D.3.b(1) of this Attachment.

[40 CFR 63.1348(a)(4)(ii)]

(2) To demonstrate initial compliance for Kiln 4, the Permittee shall conduct the separate performance tests as specified in Condition VI.D.3.b(1) of this Attachment while the raw mill kiln is operating and while the raw mill of the kiln is not operating. The time weighted average total organic HAP concentration measured during the separate initial performance test shall be used to determine initial compliance.

[40 CFR 63.1348(a)(4)(iii) and 63.1348(a)(4)(iv)]

(3) The time weighted average THC concentration measured during the initial performance test in Condition VI.D.3.a of this Attachment shall be used to determine the site-specific THC limit. Using the fraction of time the inline kiln/raw mill is on and the fraction of time that the inline kiln/raw mill is off, the Permittee shall calculate this limit as a time weighted average of the THC levels measured during raw mill on and

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raw mill off testing using one of the two approaches in 40 CFR 63.1349(b)(7)(viii) or (ix) as described in Condition VI.D.3.b(3) of this Attachment depending on the level of organic HAP measured during the compliance test.

[40 CFR 63.1348(a)(4)(v)]

(4) The Permittee shall demonstrate continuous compliance using the monitoring methods and procedures in Condition VI.D.2.d of this Attachment.

[40 CFR 63.1348(b)(6)(i)]

(5) THC must be measured either upstream of the coal mill or in the coal mill stack.

[40 CFR 63.1348(b)(6)(ii)]

5. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 40 CFR 63.1343(a), 63.1343(b)(1) & (6), 63.1348(a)(4), 63.1348(b)(6), 63.1349(b)(4) & (7), and 63.1350(i) & (j),

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

E. Mercury Requirements

1. The compliance date for the mercury requirements under this Section shall be September 9, 2016.

2. Emission Standards

a. The Permittee shall not cause to be discharged into the atmosphere from any kiln any gases which contain mercury more than 55 pounds/MM Tons of clinker, based on rolling 30-day average.

[40 CFR 63.1343(a) and 40 CFR 63.1343(b)(1)]

b. No kiln shall use as a raw material or fuel any fly ash where the mercury content of the fly ash has been increased through the use of activated carbon, or any other sorbent, unless the facility can demonstrate that the use of that fly ash will not result in an increase in mercury emissions over baseline emissions (i.e., emissions not using the fly ash). The Permittee has the burden of proving there has been no emissions increase over baseline. Once the kiln is in compliance with mercury emission limit specified in Condition VI.E.2.a, this condition shall no longer be applicable.

[40 CFR 63.1346(f)]

3. Monitoring Requirements

The Permittee shall install, calibrate, operate and maintain *a mercury continuous emissions monitoring system (Hg CEMS) on the kiln stacks in accordance with Performance Specification 12A of Appendix B to 40 CFR*

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Part 60 or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B (PS 12B) of Appendix B to 40 CFR Part 60.

[40 CFR 63.1350(k) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

The Permittee shall monitor mercury continuously according to Conditions VI.E.3.a through VI.E.3.e below.

a. The Permittee shall use a span value for any Hg CEMS that represents the mercury concentration corresponding to approximately two times the emissions standard rounded up to the nearest multiple of 5 μg/m^3 of total mercury or higher level if necessary to include Hg concentrations which may occur (excluding concentrations during in-line raw "mill off" operation). As specified in PS 12A, Section 6.1.1, the data recorder output range shall include the full range of expected Hg concentration values which would include those expected during "mill off" conditions. Engineering judgments made and calculations used to determine the corresponding span concentration from the emission standard shall be documented in the site-specific monitoring plan and associated records.

[40 CFR 63.1350(k)(1)]

In order to quality assure data measured above the span value, the Permittee shall use one of the following three options. Where these options are employed while the kiln is operating in a mill-off mode, the "above span" described in Condition VI.E.3.b(3) below may substitute for the daily upscale calibration provided the data normalization process in Condition VI.E.3.b(3) below are not required. If data normalization is required, the normal daily upscale calibration check must be performed to quality assure the operation of the CEMS for that day. In this particular case, adjustments to CEMS normally required by Procedure 5 when a daily upscale does not meet the 5 percent criterion are not required, unless Condition VI.E.3.b(3) data normalization is necessary and a subsequent normal daily calibration check demonstrates the need for such adjustment.

[40 CFR 63.1350(k)(2)]

(1) The Permittee shall include a second span that encompasses the Hg emission concentrations expected to be encountered during "mill off" conditions. This second span may be rounded to a multiple of 5 μg/m^3 of total mercury. The requirements of PS- 12A, shall be followed for this second span with the exception that a RATA with the mill off is not required.

[40 CFR 63.1350(k)(2)(i)]

(2) The Permittee shall quality assure any data above the span value by proving instrument linearity beyond the span value

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established in Condition VI.E.3.a using the following procedure.

The Permittee shall conduct a weekly "above span linearity" calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75 percent of the highest measured hourly concentration. The "above span" reference gas must meet the requirements of PS 12A, Section 7.1 and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The "above span linearity" challenge is successful if the value measured by the Hg CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the Hg CEMS during the above span linearity challenge exceeds ±10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new "above span linearity" challenge met before returning the Hg CEMS to service, or data above span from the Hg CEMS must be subject to the quality assurance procedures established in Condition VI.E.3.a(3) below. In this manner values measured by the Hg CEMS during the above span linearity challenge exceeding ±20 percent of the certified value of the reference gas must be normalized using Equation 22.

[40 CFR 63.1350(k)(2)(ii)]

(3) The Permittee shall quality assure any data above the span value established in Condition VI.E.3.a using the following procedure.

Any time two consecutive one-hour average measured concentrations of Hg exceeds the span value you must, within 24 hours before or after, introduce a higher, "above span" Hg reference gas standard to the Hg CEMS. The "above span" reference gas must meet the requirements of PS 12A, Section 7.1, must target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include "above span" calibrations done before or after the above span measurement period. Record and report the results of this procedure as you would for a daily calibration. The "above span" calibration is successful if the value measured by the

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Hg CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the Hg CEMS exceeds 20 percent of the certified value of the reference gas, then the Permittee must normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the "above span" calibration for reporting based on the Hg CEMS response to the reference gas as shown in the equation below:

Normalized stack gas result:

$$\frac{Certified\ reference\ gas\ value}{Measured\ value\ of\ reference\ gas} \times Measured\ stack\ gas\ result$$

[40 CFR 63.1350(k)(2)(iii)]

(4) Only one "above span" calibration is needed per 24 hour period. If the "above span" calibration is conducted during the period when measured emissions are above span and there is a failure to collect at least one valid data point in an hour due to the calibration duration, then the Permittee must determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an "above span" calibration is being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour.

b. The Permittee shall operate and maintain each Hg CEMS or an integrated sorbent trap monitoring system according to the quality assurance requirements in Procedure 5 of Appendix F to 40 CFR Part 60. During the RATA of integrated sorbent trap monitoring systems required under Procedure 5, the Permittee may apply the appropriate exception for sorbent trap section 2 breakthrough:

[40 CFR 63.1350(k)(3)]

(1) For stack Hg concentrations >1 µg/dscm, <10% of section 1 mass;

(2) For stack Hg concentrations <1 µg/dscm and >0.5 µg/dscm, <20% of section 1 mass;

(3) For stack Hg concentrations <0.5 µg/dscm and >0.1 µg/dscm, <50% of section 1 mass; and

(4) For stack Hg concentrations <0.1 µg/dscm, no breakthrough criterion assuming all other QA/QC specifications are met.

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c. Relative accuracy testing of mercury monitoring systems under PS 12A, PS 12B, or Procedure 5 shall be conducted at normal operating conditions with the raw mill on

[40 CFR 63.1350(k)(4)]

d. *The Permittee shall install, calibrate,* operate, and maintain *instruments for continuously measuring and recording each kiln exhaust gas flow rate to the atmosphere according to the requirements in Condition II.B.3 of this Attachment. The Permittee shall make appropriate moisture correction to the kiln exhaust gas flow rates.*

[40 CFR 63.1350(k)(5), 40 CFR 63.1343(a) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

e. If the Permittee operates an integrated sorbent trap monitoring system conforming to PS 12B, the Permittee may use a monitoring period at least 24 hours but no longer than 168 hours in length. The Permittee shall use a monitoring period that is a multiple of 24 hours (except during relative accuracy testing as allowed in PS 12B).

[40 CFR 63.1350(k)(6)]

4. Compliance and Performance Test Requirements

a. Initial Compliance

(1) The Permittee shall demonstrate compliance by operating a mercury CEMS or a sorbent trap based CEMS. The Permittee shall demonstrate initial compliance with the mercury emissions standard based on the emissions rate for first 30 operating days the Permittee operates a mercury CEMS or sorbent trap monitoring system after the compliance date of September 9, 2016 using following equation.

[40 CFR 63.1348(a)(5), 40 CFR 63.1349(b)(5)]

$$E_{30D} = k \frac{\sum_{i=1}^{n} C_i Q_i}{P}$$

E_{30D} = 30-day rolling emission rate of mercury, lb/MM tons clinker;

C_i = Concentration of mercury for operating hour i, µg/scm;

Q_i = Volumetric flow rate of effluent gas for operating hour i, where Cs and Qs are on the same basis (either wet or dry), scm/hr;

K = Conversion factor, 1 lb/454,000,000 µg;

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n = Number of kiln operating hours in the previous 30 kiln operating day period where both C and Qi qualified data are available.

P = Total runs from the previous 30 days of clinker production during the same time period as the mercury emissions measured, million tons

(2) If the Permittee uses an integrating sorbent trap CEMS, the Permittee shall assign the average Hg emissions concentration determined for an integrating period (e.g., 7 day sorbent trap monitoring system sample) to each relevant hour of the kiln operating days spanned by each integrated sample and calculate the 30 kiln operating day emissions rate value using the assigned hourly Hg emissions concentrations and the respective flow and production rate values collected during the 30 kiln operating day performance test period. Depending on the duration of each integrated sampling period, the Permittee may not be able to calculate the 30 kiln operating day emissions value until several days after the end of the 30 kiln operating day performance test period.

[40 CFR 63.1348(a)(5)(i)]

(3) For example, a sorbent trap monitoring system producing an integrated 7-day sample will provide Hg concentration data for each hour of the first 28 kiln operating days (i.e., four values spanning 7 days each) of a 30 operating day period. The Hg concentration values for the hours of the last 2 days of the 30 operating day period will not be available for calculating the emissions for the performance test period until at least five days after the end of the subject period.

[40 CFR 63.1348(a)(5)(ii)]

b. Continuous Compliance

(1) The Permittee shall demonstrate compliance using the monitoring methods and procedures in Condition VI.E.3 of this Attachment.

[40 CFR 63.1348(b)(7)(i)]

(2) If the Permittee uses an integrated sorbent trap Hg CEMS to determine ongoing compliance, the Permittee shall use the procedures described in Condition VI.E.4.a(2) of this Attachment to assign hourly mercury concentration values and to calculate rolling 30 operating data emissions rates. Since the Permittee assigns the mercury concentration measured with the sorbent trap to each relevant hour respectively for each operating day of the integrated period, the Permittee may schedule the sorbent change periods to

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any time of the day (i.e., the sorbent trap replacement need not be scheduled at 12:00 midnight nor must the sorbent trap replacements occur only at integral 24-hour intervals).
[40 CFR 63.1348(b)(7)(i)]

(3) Mercury must be measured either upstream of the coal mill or in the coal mill stack.
[40 CFR 63.1348(b)(7)(ii)]

5. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 63.1343(a), 63.1343(b)(1). 63.1346(f), 63.1348(a)(5), 1349(b)(5) & (7), and 63.1350(k),
[A.A.C. R18-2-325]

F. HCl Requirements

1. The compliance date for the HCl requirements under this Section shall be September 9, 2016.

2. Emission Standard

The Permittee shall not cause to be discharged into the atmosphere from any kiln any gases which contain HCl more than 3 ppmvd on dry basis, corrected to 7 percent oxygen. If the Permittee uses CEMS for compliance, the emission limit is based on rolling 30-day average.
[40 CFR 63.1343(a) and 40 CFR 63.1343(b)(1)]

3. Operating Limitations

The Permittee may choose to install lime injection on the Kiln 4 Baghouse to assist in achieving compliance with the HCl emission limit set forth in Condition VI.F.2 of this Attachment. The lime injection system may be used intermittently, if necessary, to achieve compliance with the HCl emission limit.
[A.A.C. R18-2-306.A.2]

4. Monitoring Requirements

The Permittee shall operate HCl CEMS on the kiln stacks in accordance to one of the following requirements:

a. *The Permittee shall install* operate, maintain, and *quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of Appendix F to 40 CFR Part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 shall be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15.*
[40 CFR 63.1350(l)(1) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

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b. *Alternatively, upon promulgation, the Permittee may install and operate the HCl CEMS in accordance with any other performance specification in Appendix B to 40 CFR Part 60. When promulgated, if the Permittee chooses to install and operate an HCl CEMS in accordance with PS 18 of Appendix B to 40 CFR Part 60, the Permittee shall* operate, maintain and *quality assure the HCl CEMS using the associated Procedure 6 of Appendix F to 40 CFR Part 60.*

[40 CFR 63.1350(l)(1) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

c. For any of the above performance specifications, the Permittee shall use Method 321 of Appendix A to 40 CFR Part 63 as the reference test method for conducting relative accuracy testing. Span value and calibration requirements specified in 40 CFR 63.1350(l)(i) and (ii) shall apply to these HCl CEMS.

[40 CFR 63.1350(l)(1)]

d. If the Permittee employs lime injection as an emission control technique for HCl control, the Permittee shall operate the lime injection system in accordance with the following conditions:

(1) The Permittee shall maintain records of the amount of lime injected.

(2) The Permittee shall maintain records of all major maintenance activities conducted on air pollution control equipment.

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

5. Compliance and Performance Test Requirements

a. The Permittee shall demonstrate initial and continuous compliance by operating CEMS as per Condition VI.F.4.

[40 CFR 63.1348(a)(6)(ii) and 1348(b)(8)]

b. Initial compliance shall be based on the 30 kiln operating days that occur after September 9, 2016 in which the Permittee operates using a HCl CEMS. Hourly HCl concentration data shall be obtained according to Condition VI.F.4.

[40 CFR 63.1348(a)(6)(ii) and 63.1349(b)(6)(ii)]

c. Performance tests required every 30 months must be completed no more than 31 calendar months after the previous performance test except where that specific pollutant is monitored using CEMS; performance tests required every 12 months must be completed no more than 13 calendar months after the previous performance test.

[40 CFR 63.1349(c)]

6. Permit Shield

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Compliance with the Conditions of this Subsection shall be deemed compliance with 40 CFR 63.1343(a), 63.1343(b)(1), 1348(a)(6) & (b)(8), 63.1349(b)(6) and 63.1350(l)(1)

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

G. Carbon Monoxide (CO) and Nitrogen Oxides (NO_X)

1. Emission Standards

a. *Total emissions of carbon monoxide from Kilns 1, 2, 3, and Kiln 4 in-line kiln/raw mill shall not exceed 5,069 tons per year (12-month rolling total calculated at the end of each month).*

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

b. *Total emissions of nitrogen oxides from Kilns 1, 2, 3, and Kiln 4 in-line kiln/raw mill shall not exceed 5,144 tons per year (12-month rolling total calculated at the end of each month).*

[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

2. Monitoring Requirements

a. *The Permittee shall calibrate,* maintain and operate *continuous emission monitoring systems to measure carbon monoxide (CO) and nitrogen oxides (NO_X) mass emissions from Kilns 1,2,3, and Kiln 4 in-line kiln/raw mill.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R1-2-306.A.3.c, A.A.C. R18-2-331.A.3.c and R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

b. The continuous emission rate monitoring systems shall meet the following requirements:

[A.A.C. R18-2-306(A)(3)(c), -312(H)(3), and Permit 1000542 Condition VI]

(1) 40 CFR Part 60, Appendix B, “Performance Specifications.”

(a) The NO_X continuous emission rate monitoring systems shall meet the requirements of Performance Specification 2, Specifications and test procedures for SO_2 and NO_X continuous emission monitoring systems in stationary sources, in Appendix B to 40 CFR Part 60.

(b) The CO continuous emission rate monitoring system shall meet the requirements of Performance Specification 4a, Specifications and test procedures for carbon monoxide continuous emission

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monitoring systems in stationary sources, in Appendix B to 40 CFR Part 60.

(c) The NO_X and CO continuous emission rate monitoring systems shall meet the requirements of Performance Specification 6, Specifications and test procedures for continuous emission rate monitoring systems in stationary sources, in Appendix B to 40 CFR Part 60.

(2) 40 CFR Part 60, Appendix F, "Quality Assurance Procedures."

The Permittee shall continue to implement the ADEQ approved Quality Assurance/Quality Control Plan which includes procedures for dealing with data gaps based on the procedures contained in 40 CFR Part 75, Subpart D (40 CFR 75.30).

c. Instrument span shall be such that the expected output is 50 to 70 percent of span.

d. All data shall be retained on site in electronic form and shall be available for review by ADEQ.

e. The Permittee shall maintain a file of all measurements, including the continuous monitoring system and performance testing data; continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices. These data shall be recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports and records.

f. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, the Permittee shall meet minimum frequency of operation requirements as follows: the continuous monitoring system shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

g. For continuous monitoring system measurements, one-hour arithmetic averages shall be computed from four or more data points equally spaced over each one-hour period. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this condition.

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h. The Permittee shall calculate and record the total carbon monoxide and nitrogen oxides emissions from all kilns at the end of each month, for the preceding 12-month period. This record shall be retained for at least five years following the date of such measurements.

i. The following shall be considered periods of excess emissions:

(1) All 12-month periods for which the NO_X emission rate to the atmosphere as determined in accordance with Condition VI.G.2.h exceeds the applicable emission standard in Condition VI.G.1.b.

(2) All 12-month periods for which the CO emission rate to the atmosphere as determined in accordance with Condition VI.G.2.h exceeds the emission standard in Condition VI.G.1.a.

H. Sulfur Dioxide (SO_2)

1. Emission Standards

The Permittee shall not emit sulfur dioxide from kilns in an amount in excess of 6 pounds of sulfur oxides, calculated as sulfur dioxide, per ton cement kiln feed.

[A.A.C. R-18-2-705.D]

2. Performance Test Requirement

The Permittee shall conduct a performance test once during the permit term in accordance with EPA Reference Method 6C of 40 CFR Part 60, Appendix A, to measure the concentration of sulfur dioxide being emitted into the atmosphere from Kilns 1, 2, 3 and 4. Testing of Kilns 1, 2 and 3 shall be conducted within 90 days of startup. The tests shall be conducted while burning the fuel or fuel mix containing the highest possible sulfur content for the year.

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

I. Regional Haze Requirements

1. Applicability

This section applies to Kiln 4 for the reduction of NO_X emissions as required per the Regional Haze Rule.

[40 CFR 52.145(k)(1)]

2. Emissions limitations and Standards

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The Permittee shall not emit or cause to be emitted from Kiln 4 NO_X in excess of 3.46 pounds of NO_X per ton of clinker produced, based on a rolling 30-kiln operating day basis.

[40 CFR 52.145(k)(3)(ii)]

3. Compliance Date

The Permittee shall comply with the requirements of Condition VI.I of this Attachment no later than December 31, 2018.

[40 CFR 52.145(k)(5)(i)]

4. Compliance Determinations

a. Continuous Emission Monitoring System

(1) *The Permittee shall maintain, calibrate,* and operate *a CEMS, in full compliance with the requirements found at 40 CFR 60.63(f) and (g), to accurately measure concentration by volume of NO_X, diluent, and stack gas volumetric flow rate from Kiln 4 in-line kiln/raw mill stack (H5-GB).*

[A.A.C. R18-2-331.A.3.c and 40 CFR 52.145(k)(7)(i)(B)]
[Material Permit Conditions are indicated by underlines and italics]

(2) The Permittee shall use CEMS to determine compliance with the emission limitation in Condition VI.I.2 of this attachment, in combination with data on actual clinker production.

[40 CFR 52.145(k)(7)(i)(B)]

(3) The Permittee must operate the monitoring system and collect data at all required intervals at all times Kiln 4 is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

[40 CFR 52.145(k)(7)(i)(B)]

b. Methods

(1) The Permittee shall record the daily clinker production rates.

[40 CFR 52.145(k)(7)(ii)(A)]

(2) Compliance Calculations

(a) The Permittee shall calculate and record the 30-kiln operating day average emission rate of NO_X, in pounds per ton (lb/ton) of clinker produced, as the total of all hourly emissions data for the cement kiln in the preceding 30-kiln operating days, divided by

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the total tons of clinker produced in that kiln during the same 30-day operating period, using the following equation:

$$E_D = k\left(\frac{1}{n}\right)\frac{\sum_{i-1}^{n} C_i Q_i}{\sum_{i=1}^{n} P_i}$$

Where:

E_D = 30 kiln operating day average emission rate of NO_X, lb/ton of clinker;

C_i = Concentration of NO_X for hour i as recorded by the CEMS required by Condition VI.I.4.a of this attachment, ppm;

Q_i = Volumetric flow rate of effluent gas for hour i as recorded by the CEMS required by Condition VI.I.4.a of this attachment, where Ci and Qi are on the same basis (either wet or dry), scf/hr;

P_i = Total kiln clinker produced during production hour i, ton/hr;

k = Conversion factor, 1.194 × 10−7 for NO_X; and

n = Number of kiln operating hours over 30 kiln operating days, n = 1 up to 720.

[40 CFR 52.145(k)(7)(ii)(B)(1)]

(b) For each kiln operating hour for which the Permittee does not have at least one valid 15-minute CEMS data value, the Permittee must use the average emissions rate in pounds per hour (lb/hr) from the most recent previous hour for which valid data are available. Hourly clinker production shall be determined by the Permittee in accordance with the requirements found at 40 CFR 60.63(b).

[40 CFR 52.145(k)(7)(ii)(B)(2)]

(3) At the end of each kiln operating day, the Permittee shall calculate and record a new 30-day rolling average emission rate in lb/ton clinker from the arithmetic average of all valid hourly emission rates for the current kiln operating day and the previous 29 successive kiln operating days.

[40 CFR 52.145(k)(7)(ii)(C)]

(4) Upon and after the completion of installation of ammonia (NH_3) and/or urea injection on a unit (hereinafter referred to

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as NH_3 injection), the Permittee shall install, and thereafter maintain and operate, instrumentation to continuously monitor and record levels of NH_3 injection for that unit.
[40 CFR 52.145(k)(7)(ii)(D)]

5. Recordkeeping Requirements

The Permittee shall maintain the following records for at least five years:

a. All CEMS data, including the date, place, and time of sampling or measurement; emissions and parameters sampled or measured; and results.
[40 CFR 52.145(k)(9)(i)]

b. All records of clinker production.
[40 CFR 52.145(k)(9)(ii)]

c. Daily 30-day rolling emission rates of NO_X, calculated in accordance with Condition VI.I.4.b(2) of this Attachment.
[40 CFR 52.145(k)(9)(iii)]

d. Records of quality assurance and quality control activities for emissions measuring systems including, but not limited to, any records specified by 40 CFR Part 60, Appendix F, Procedure 1.
[40 CFR 52.145(k)(9)(iv)]

e. Records of NH_3 injection, as recorded by the instrumentation required in Condition VI.I.4.b(4) of this attachment.
[40 CFR 52.145(k)(9)(v)]

f. Records of all major maintenance activities conducted on emission units, air pollution control equipment, CEMS and clinker production measurement devices.
[40 CFR 52.145(k)(9)(vi)]

g. Any other records specified by 40 CFR Part 60, Subpart F, or 40 CFR Part 60, Appendix F, Procedure 1.
[40 CFR §52.145(k)(9)(vii)]

6. Reporting Requirements

All reports and notifications required under Section VI.I of this Attachment shall be submitted by the Permittee to ADEQ; the U.S. Environmental Protection Agency, Region 9, Air Division via electronic mail to aeo_r9@epa.gov; and to the U.S. Environmental Protection Agency Enforcement Division via electronic mail to R9AirPermits@epa.gov. Reports required under Condition VI.I.6.c through Condition VI.I.6.g of this Attachment shall be submitted within 30 days after the applicable compliance date in Condition VI.I.3 and at least semiannually thereafter, within 30 days after the end of a semiannual period. The Permittee may submit reports more frequently than semiannually for the purposes of

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synchronizing reports required under this section with other reporting requirements, such as the Title V monitoring report required by 40 CFR 70.6(a)(3)(iii)(A), but at no point shall the duration of a semiannual period exceed six months.

[40 CFR 52.145(k)(11)]

a. Prior to commencing construction of the NH_3 injection system, the Permittee shall submit to the EPA a report describing the design of the SNCR system. This report shall include:

(1) Reagent type,

(2) Description of the locations selected for reagent injection,

(3) Reagent injection rate (expressed as a molar ratio of reagent to exhaust gas),

(4) Equipment list,

(5) Equipment arrangement, and

(6) A summary of kiln characteristics that were relied upon as the design basis for the SNCR system.

[40 CFR 52.145(k)(11)(i)]

b. Within 30 days following the NO_X compliance date in Condition VI.I.3 the Permittee shall submit to the EPA a report of any process improvement or debugging activities that were performed on the SNCR system. This report shall include:

(1) A description of each process adjustment performed on the SNCR system or the kiln,

(2) A discussion of whether the adjustment affected NO_X emission rates,

(3) A description of the range (if applicable) over which the adjustment was examined, and

(4) A discussion of how the adjustment will be reflected or accounted for in kiln operating practices.

(5) If CEMS data or kiln operating data were recorded during process improvement or debugging activities, the Permittee shall submit the recorded CEMS and kiln operating data with the report.

(6) The data shall be submitted in an electronic format consistent with and able to be manipulated by a spreadsheet program such as Microsoft Excel.

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[40 CFR 52.145(k)(11)(ii)]

c. The Permittee shall submit a report that lists the daily 30-day rolling emission rates for NO_X.

[40 CFR 52.145(k)(11)(iii)]

d. The Permittee shall submit excess emissions reports for NO_X limits. Excess emissions means emissions that exceed the emissions limits specified in Condition VI.I.2 of this Attachment. The reports shall include the following:

(1) The magnitude,

(2) Date(s), and

(3) Duration of each period of excess emissions,

(4) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the unit,

(5) The nature and cause of any malfunction (if known), and

(6) The corrective action taken or preventative measures adopted.

[40 CFR 52.145(k)(11)(iv)]

e. The Permittee shall submit CEMS performance reports, to include dates and duration of each period during which the CEMS was inoperative (except for zero and span adjustments and calibration checks), reason(s) why the CEMS was inoperative and steps taken to prevent recurrence, and any CEMS repairs or adjustments.

[40 CFR 52.145(k)(11)(v)]

f. The Permittee shall also submit results of any CEMS performance tests specified by 40 CFR part 60, Appendix F, Procedure 1 (Relative Accuracy Test Audits, Relative Accuracy Audits, and Cylinder Gas Audits).

[40 CFR 52.145(k)(11)(vi)]

g. When no excess emissions have occurred or the CEMS has not been inoperative, repaired, or adjusted during the reporting period, the Permittee shall state such information in the reports required by Condition VI.I.6.e of this attachment.

[40 CFR 52.145(k)(11)(vii)]

7. Notification Requirements

a. The Permittee shall submit notification of commencement of construction of any equipment which is being constructed to comply with the NO_X emission limits in Condition VI.I.2 of this Attachment.

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[40 CFR 52.145(k)(13)(i)]

b. The Permittee shall submit semiannual progress reports on construction of any such equipment.

[40 CFR 52.145(k)(13)(ii)]

c. The Permittee shall submit notification of initial startup of any such equipment.

[40 CFR 52.145(k)(13)(iii)]

8. Equipment Operation

a. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the unit including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Pollution control equipment shall be designed and capable of operating properly to minimize emissions during all expected operating conditions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Regional Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the unit.

[40 CFR 52.145(k)(14)(i)]

b. After completion of installation of NH_3 injection on a unit, the Permittee shall inject sufficient NH_3 to achieve compliance with NO_X emission limits set forth in Condition VI.I.2 of this Attachment while preventing excessive NH_3 emissions.

[40 CFR 52.145(k)(14)(ii)]

9. Enforcement

Notwithstanding any other provision in Condition VI.I of this Attachment, any credible evidence or information relevant as to whether the unit would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, can be used to establish whether or not the Permittee has violated or is in violation of any standard or applicable emission limit in Condition VI.I of this Attachment.

[40 CFR 52.145(k)(15)]

VII. OTHER FACILITIES (EXCEPT KILNS AND CLINKER COOLERS)

A. Applicability

The requirements under this Section are applicable to raw mills, finish mills, kiln feed silos, proportioning silos, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems identified in the last column of Equipment List in Attachment “D”.

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B. Particulate Matter

1. The Permittee shall not cause, allow or permit the discharge of particulate matter from any identifiable process source within any existing cement plant that commenced construction on or before August 17, 1971, to exceed the amounts calculated by one of the following equations:

a. 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:
[A.A.C. R18-2-705.B]

$E = 4.10\ P^{0.67}$

Where:

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

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

b. 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:

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

Where "E" and "P" are defined as indicated in Condition VI.B.1.a(1) above.

c. *The Permittee shall not cause or allow to be emitted into atmosphere from any dust collector gases which contain PM and PM_{10} emissions in excess of the following rates:*
[A.A.C. R18-2-306.01 and A.A.C. R18-2-331.A.3.a]
[Material Permit Conditions are indicated by underlines and italics]

Dust Collector ID	PM Emission Limit (lbs/hr)	PM_{10} Emission Limit (lbs/hr)
H2-DC2	0.01	0.01
C2-DC3	0.334	0.334
D4-DC1	1.671	1.671
D4-DC2	0.668	0.668
F2-DC4	0.062	0.062
AC-DC1	0.373	0.373
CM-DC17	0.497	0.497
D2-DC4	0.166	0.166

d. The Permittee shall not cause or allow emissions which contain PM_{10} in excess of 0.005 gr/dscf from dust collector (D2-1-DC1) for D2 Finish Mill (D2-1-M).
[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition V.C]

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e. The Permittee shall not cause or allow emissions which contain PM_{10} in excess of 0.005 gr/dscf from the following dust collectors.
[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VII.C]

(1) C2-DC2;

(2) C2-DC3;

(3) C2-DC4;

(4) C2-DC5;

(5) C2-DC6;

(6) C2-DC7;

(7) C2-DC8;

(8) C2-DC9;

(9) C2-DC10;

(10) C2-DC11;

(11) C2-DC12;

(12) C2-DC13;

(13) D2-DC1;

(14) D2-DC3;

(15) D2-DC4;

(16) D2-DC5;

(17) D2-DC6;

(18) D2-DC7;

(19) F2-DC1;

(20) F2-DC4;

(21) D4-DC1;

(22) D4-DC2;

(23) AC-DC1; and

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(24) CM-DC17.

2. Opacity

a. The Permittee shall not cause to be discharged from any raw material, clinker, or finished product storage bin, conveying system transfer point, bagging system, raw material dryer, raw & finish mills, and bulk loading or unloading system any gases which exhibit opacity in excess of 10 percent.

[40 CFR 63.1345]

b. The Permittee shall not discharge into the atmosphere from any affected facility constructed after August 17, 1971, any gases which exhibit 10 percent opacity, or greater.

[40 CFR 60.62(c)]

c. The Permittee shall not cause or allow visible emissions from the D4 Raw Mill Additive Feed Hopper (D4-HOP) in excess of 10 percent opacity.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition III.B]

d. The Permittee shall not cause or allow visible emissions from the D4 Raw Mill Rejects Bin (D4-SB1) in excess of 20 percent opacity.

[Consent Decree 4:10-CV-00573-DCB Exhibit A Condition IV.B]

3. Air Pollution Control Requirements

a. *At all times including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable,* maintain and *operate all affected sources and the following dust collectors in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.* This Condition is not material in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.2, A.A.C. R18-2-331.A.3.e and A.A.C. R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

AC1-DC1, AC2-DC1, AC3-DC1, AC4-DC1, CM1-DC1, CM2-DC1, CM3-DC1, CM4-DC1, CM5-DC1, CM6-DC1, CM7-DC1, CM7-DC2, CM7-DC3, D2-1-DC1, D3-1-DC1, D3-1-DC2, D3-1-DC3, BL-DC1, BL-DC2, BL-DC3, BL-DC4, BL-DC5, BL-DC6, BL-DC7, BL-SB5-DC1, BL-SB5-DC2, BL-SB5-DC3, C2-DC2, C2-DC3, C2-DC4, C2-DC5, C2-DC6, C2-DC7, C2-DC8, C2-DC9, C2-DC10, C2-DC11, C2-DC12, C2-DC13, CM-MA-DC1, AC-DC1, AC-DC3, CM-DC4, CM-DC5, CM-DC8, CM-DC9, CM-DC10, CM-DC11, CM-DC12, CM-DC14, CM-DC15, CM-DC16, CM-DC17, D2-DC1, D2-DC3, D2-DC4, D2-DC5, D2-DC6, D2-DC7, D4-DC1, D4-DC2, F2-PS-DC1, F2-PS-DC2, F2-PS-DC3, F3-KS-DC1, F2-DC1, F2-DC4, F2-SB2-DC, F3-DC1, F3-DC2, H4-K1-DC, H4-K2-DC, H4-K3-DC, H2-

KB1-DC, H2-KB3-DC, H2-DC1, H2-DC2, H2-DC3, H2-DC4, H2-DC5, H4-DC1, H5-DC1, H5-5-DC2, PH-DC1, PH-DC2, PH-DC3, PH-DC4, PH-DC5, AC-BE2-DC, D2-PC.

b. D4 Raw Mill Additive Feed Hopper (D4-HOP)

(1) When the D4 Raw Mill Additive Feed Hopper is in use, the Permittee shall use water sprays as needed to comply with the emission limits in Condition VII.B.2.c of this Attachment.
[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition III.C]

(2) The Permittee shall inspect the water spray system annually to ensure proper operation.
[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition III.C]

c. The D4 Raw Mill Rejects Bin (D4-SB1)

(1) The D4 Raw Mill Rejects Bin shall be in an enclosed bin which is controlled through the raw mill system.
[Consent Decree 4:10-CV-00573-DCB Exhibit A Condition IV.C]

(2) The Permittee shall inspect the bin enclosure and associated control systems for leaks and malfunctions during planned, periodic maintenance.
[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition IV.C]

d. During the periods when the clinker is transferred to trucks from the Clinker Bypass Bin (H2-SB1), the Permittee shall take all measures, including minimizing the gap between the chute and the truck, to minimize fugitive emissions.
[A.A.C R18-2-306.A.3.c]

4. Opacity Monitoring Requirements

a. Opacity Monitoring for raw material, clinker, or finished product storage bin, conveying system transfer point, bagging system, raw material dryer and bulk loading or unloading system except H2-DC3 for Clinker Bypass Bin (H2-SB1).
[40 CFR 63.1350(f)(1)]

(1) The Permittee shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A–7 to 40 CFR 60. The performance test must be conducted while the affected source is in operation.
[40 CFR 63.1350(f)(1)(i)]

(2) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of performance testing from monthly to semiannually for that affected source. If visible

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emissions are observed during any semiannual test, the Permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

[40 CFR 63.1350(f)(1)(ii)]

(3) If no visible emissions are observed during the semiannual test for any affected source, the Permittee may decrease the frequency of performance testing from semiannually to annually for that affected source. If visible emissions are observed during any annual performance test, the Permittee shall resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

[40 CFR 63.1350(f)(1)(iii)]

(4) If visible emissions are observed during any Method 22 performance test, the Permittee shall conduct 30 minutes of opacity observations, recorded at 15-second interval in accordance with Method 9 of Appendix A–4 to 40 CFR 60. The Method 9 performance test shall begin within 1 hour of any observation of visible emissions.

[40 CFR 63.1350(f)(1)(iv)]

(5) The requirements to conduct Method 22 visible emissions monitoring do not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

[40 CFR 63.1350(f)(1)(v]

(6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall conduct a Method 22 performance test according to the requirements of Conditions VII.B.4.a(1) through VII.B.4.a(4) above for each such conveying system transfer point located within the building, or for the building itself, according to Condition VII.B.4.a(7) below.

[40 CFR 63.1350(f)(1)(vi)]

(7) If visible emissions from a building are monitored, the requirements of Conditions VII.B.4.a(1) through VII.B.4.a(4) above apply to the monitoring of the building, and, the Permittee must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

[40 CFR 63.1350(f)(1)(vii)]

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b. Opacity Monitoring During Clinker Bypass bin operation

(1) During the periods when the Clinker Bypass Bin (H2-SB1) is in operation and loading clinker to trucks or to ground, the Permittee shall conduct a 10-minute visible emissions test of each affected sources in accordance with Method 22 of Appendix A–7 to 40 CFR 60.

[40 CFR 63.1350(f)(1)(i)]

(2) If visible emissions are observed during any Method 22 test, the Permittee shall conduct 30 minutes of opacity observations, recorded at 15-second interval in accordance with Method 9 of Appendix A–4 to 40 CFR 60. The Method 9 performance test shall begin within 1 hour of any observation of visible emissions.

[40 CFR 63.1350(f)(1)(iv)]

(3) If the opacity observation exceeds 10%, the Permittee shall report it as an excess emission in accordance with Section XI of Attachment “A”.

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

c. Opacity Monitoring for Dust Collectors under Condition VII.B.1.e

(1) The Permittee shall conduct a monthly 1-minute visible emission test of each dust collector listed in Condition VII.B.1.e of this Attachment in accordance with EPA Reference Method 22 of Appendix A to 40 CFR Part 60.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VII.D]

(2) If visible emissions are observed, an investigation of the dust collector will be initiated within 24 hours to determine if there is a need for corrective action. If corrective action is required, it shall be implemented as soon as practicable in order to advert or minimize any possible exceedances of the emission limit.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VII.D]

(3) If no visible emissions are observed in six consecutive monthly tests, the testing frequency may be reduced from monthly to a semiannual test. If visible emissions are observed during any semiannual test, the visible emission testing will revert back to monthly testing until no visible emissions are observed in six consecutive monthly tests.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VII.D]

(4) If no emissions are observed during the semiannual test, the testing frequency may be reduced from semiannual to an annual test. If visible emissions are observed during any annual test, the visible emission testing will revert back to

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monthly testing until no visible emissions are observed in six consecutive monthly tests.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VII.D]

(5) If visible emissions are observed during any EPA Reference Method 22 test, the Permittee shall conduct a 6-minute test of opacity in accordance with EPA Reference Method 9 of Appendix A to 40 CFR Part 60. The EPA Reference Method 9 test shall begin within one hour of any observation of visible emissions.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition VII.D]

d. Opacity Monitoring for Raw or Finish Mills

(1) The Permittee shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCD) of the raw or finish mills in accordance with the procedures of Method 22 of Appendix A–7 to 40 CFR 60. The duration of the Method 22 performance test shall be 6 minutes.

[40 CFR 63.1350(f)(2)(i)]

(2) Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the Permittee shall conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.

[40 CFR 63.1350(f)(2)(ii)]

(3) If visible emissions are observed during the follow-up Method 22 performance test from any stack from which visible emissions were observed during the previous Method 22 performance test, the Permittee shall conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of Appendix A–4 to Part 60. The duration of the Method 9 test shall be 30 minutes.

[40 CFR 63.1350(f)(2)(iii)]

e. If visible emissions are observed during any Method 22 visible emissions test conducted under Conditions VII.B.4.a through VII.B.4.d above, the Permittee shall initiate, within one-hour, the corrective actions specified in the operation and maintenance plan in Condition II.A.2 above.

[40 CFR 63.1350(f)(3)]

f. As an alternative to the requirements in Condition VII.B.4.d above, the raw mill or finish mill may be equipped with a continuous opacity monitoring system (COMS) or bag leak detection system (BLDS).

[40 CFR 63.1350(f)(4)]

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(1) If the Permittee chooses to install a COMS in lieu of conducting the daily visual emissions testing, *the Permittee shall install*, *calibrate*, maintain, and continuously *operate the COMS at the outlet of the PM control device of the raw mill or finish mill in accordance with the requirements in subpart A of 40 CFR Part 63 and PS–1 of Appendix B to 40 CFR Part 60*.

[40 CFR 63.1350(f)(4)(i) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

(2) If the Permittee choose to install a BLDS in lieu of conducting the daily visual emissions testing, *the Permittee shall install*, *calibrate,* maintain, and continuously operate *a bag leak detection system in accordance with the requirements in 40 CFR 63.1350(m)(10) and (11).*

[40 CFR 63.1350(f)(4)(ii) and A.A.C. R18-2-331.A.3.c]
[Material Permit Conditions are indicated by underlines and italics]

g. Bag Leak Detection System (BLDS) for detecting leaks in dust collector D2-1-DC1 for D2 Finish Mill

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition V.D]

(1) *The Permittee shall install, calibrate*, maintain, and operate *a Bag Leak Detection System for detecting leaks in dust collector (D2-1-DC1)*. This condition is not material, as defined in Arizona Administrative Code R18-2-331 and Arizona Revised Statutes § 49-464(G), in the event failure to comply is due to a sudden and unavoidable breakdown of the process or the control equipment, resulted from unavoidable conditions during a startup or shutdown, or resulted from upset of operations.

[A.A.C. R18-2-306.A.3, R18-2-331.A.3.c and R18-2-331.B]
[Material Permit Conditions are indicated by underlines and italics]

(2) The Bag Leak Detection System shall meet the following requirements:

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Condition V.D.2]

(a) The Bag Leak Detection System must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.0044 grains per actual cubic foot or less. “Certify” shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is 0.0044 grains per actual cubic foot or less.

(b) The sensor on the Bag Leak Detection System must provide output of relative PM emissions.

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(c) The Bag Leak Detection System must have an alarm that will activate automatically when it detects a significant increase in relative PM emissions greater than a preset level.

(d) The presence of an alarm condition should be clearly apparent to facility operating personnel.

(e) For a positive-pressure fabric filter, each compartment or cell must have a bag leak detector. For a negative-pressure or induced-air fabric filter, the bag leak detector must be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.

(f) The Bag Leak Detection System must be installed, operated, adjusted, and maintained so that it is based on the manufacturer's written specifications and recommendations.

(g) The baseline output of the Bag Leak Detection System must be established as follows:

(i) Adjust the range and the averaging period of the device; and

(ii) Establish the alarm set points and the alarm delay time.

(h) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the operations and maintenance plan. In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 1-calendar year period unless the Permittee certifies in writing to the Director that the Dust Collector has been inspected and found to be in good operating condition.

(i) The Permittee shall maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are

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necessary, no alarm time will be counted. Permittee shall continuously record the output from the Bag Leak Detection System during periods of normal operation. Normal operation does not include periods when the Bag Leak Detection System is being maintained or during startup, shutdown or malfunction.

h. Compliance Assurance Monitoring (CAM)

(1) The following dust collectors shall be subject to CAM requirements:

(a) F2-DC1

(b) F2-DC4

(c) AC-DC1

(d) AC-BE2-DC

(e) F2-PS-DC3

(f) H4-K1-DC

(g) H4-K2-DC

(h) H4-K3-DC

(i) H2-DC2

(j) C2-DC4

(k) C2-DC11

(l) C2-DC12

(m) D2-DC1

(n) D2-DC3

(o) D2-DC4

(p) D2-1-DC1

(q) BL-DC1

(r) BL-DC2

(s) BL-DC3

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(t) BL-DC4; and

(u) BL-DC6.

(2) Indicators:

Visible Emissions

[40 CFR 64.3(a)(1)]

(3) Monitoring Approach:

(a) Visible emissions from each baghouse shall be monitored once daily using EPA Reference Method 22.

(b) Bags, seals, and baghouse compartments shall be inspected annually for each baghouse.

[40 CFR 64.3(b)(4)(iii)]

(4) Indicator Range/Threshold: No visible emissions.

[40 CFR 64.3(a)(2) & (3)]

(5) Excursions Determinations:

The following shall constitute an excursion event:

(a) Any opacity observed during the visible emission survey constitutes an excursion event.

(b) Any bags or seals in poor condition, or accumulation of dust in the baghouse compartment during annual inspection.

[40 CFR 64.6(c)(2)]

(6) Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the emission points are operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The Permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to

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provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR 64.6(c)(3) and 64.9(c)]

(7) Response to Excursions

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emission point (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown, or malfunction, and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operations to within the indicator range, designated condition, or below applicable emission limitation or standard, as applicable.

[40 CFR 64.7.(d)(1)]

(b) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation, and maintenance procedures and records, and inspection of the control device, associated capture system, and process.

[40 CFR 64.7.(d)(2)]

(c) After approval of monitoring, if the Permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify ADEQ, and if necessary, submit a proposed modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not

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limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR 64.7(e)]

(d) Excursions shall be reported as required by Condition VII.B.4 of Attachment "A". The report shall include, at a minimum, the following:

[A.A.C. R18-2-309(2)(c)(iii)]

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursion or exceedances, as applicable, and the corrective actions taken; and

[40 CFR 64.9(a) (2)(i)]

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable).

[40 CFR 64.9(a) (2)(ii)]

5. Compliance and Performance Testing Requirements

a. Particulate Matter

To demonstrate compliance with the emission standards in Conditions VII.B.1.c, d and e, the Permittee shall conduct performance test on dust collectors in identified in Conditions VII.B.1.c, d and e in accordance with EPA Reference Method 5 of 40 CFR 60, Appendix A once per permit term.

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

b. Opacity

(1) The Permittee shall conduct initial performance test to demonstrate compliance with the opacity emissions standards in Condition VII.B.2.a by using the performance test methods and procedures in given below. The maximum 6-minute average opacity exhibited during the performance test period shall be used to determine whether the affected source is in compliance with the standard.

[40 CFR 63.1348(a)(2)]

(a) The Permittee shall conduct opacity tests in accordance with Method 9 of Appendix A–4 to 40 CFR 60. The duration of the Method 9 performance

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test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if:

(i) There are no individual readings greater than 10 percent opacity;

(ii) There are no more than three readings of 10 percent for the first 1-hour period;

[40 CFR 63.1349(b)(2)(i)-(ii)]

(b) For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.

[40 CFR 63.1349(b)(2)]

(2) The Permittee shall demonstrate continuous compliance with the opacity standards in Condition VII.B.2.a by complying with the monitoring requirements in Condition VII.B.4.a. The Permittee shall initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

[40 CFR 63.1348(b)(3)]

(3) The Permittee shall perform annual performance tests on Raw Mill Feed Hopper (D4-HOP) and Raw Mill Reject Bin (D4-SB1) in accordance with Method 9 of 40 CFR 60 Appendix A to demonstrate compliance with the opacity standards in Conditions VII.B.2.c and VII.B.2.d.

[Consent Decree 4:10-CV-00573-DCB, Exhibit A Conditions III.D and IV.D]

6. Recordkeeping Requirements

In addition to applicable recordkeeping and reporting requirements in Condition VI.I.5, the Permittee shall comply with the following recordkeeping requirements:

a. The Permittee shall keep records of 12-month rolling total of limestone added in the D3 mill.

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

b. The Permittee shall keep records of periods of operations of Clinker Bypass Bin (H2-SB1).

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

C. Permit Shield

Compliance with the Conditions of this Subsection shall be deemed compliance with A.A.C. R18-2-705.B & C, 40 CFR 63.1345, 60.62(c), 63.1350(f)(1), (2), (3) and (4), 40 CFR 64, and Consent Decree 4:10-CV-00573-DCB.

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

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VIII. SECONDARY MATERIALS UTILIZATION PROCEDURES

A. Fuels

1. The Permittee shall only burn the following fuels in Kilns 1, 2, 3, and Kiln 4 in-line kiln/raw mill:

[Significant Permit Revision No. 1000547 Condition VII]

Fuel Type	Maximum Fuel Proportion [1]	
	Kilns 1, 2, 3	Kiln 4
Coal	100	100
Coke	40	100
Natural Gas	100	100
Diesel	100	100
No. 2 Fuel Oil	100	100
Bunker C Oil	100	100
Chopped Tires (< 6" x 6")	0	100
On-Specification Used Oil Fuel	0	100
Wood Chips	0	100
Jet Fuel	0	100
Nonhazardous Secondary Materials (NHSMs)[2]	0	100

Note 1: Maximum Fuel Proportion is defined as the maximum percent of the actual heat input provided by a fuel component in a fuel mixture.

Note 2: NHSMs meeting the provisions of 40 CFR 241 Subpart B, Identification of Non-Hazardous Secondary Materials that are Solid Wastes When Used as Fuels or Ingredients in Combustion Units (NHSMs Rule). NHSMs include, but are not limited to, engineered fuels, biomass fuels (including, but not limited to, construction and demolition wood, pistachio shells, almond shells and yard clippings), paper cardboard, biosolids, and dust collector bags generated onsite.

2. This permit does not authorize the use of any other fuels (i.e., any fuels other than those listed in above, including, but not limited to, off-specification used oil fuel, hazardous waste or hazardous waste fuel without prior approval by ADEQ).

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[Significant Permit Revision No. 1000547 Condition VII]

3. The Permittee may conduct short-term performance testing to evaluate emissions from fuel with percentages greater than those allowed above only after the Director's approval of a detailed test plan that identifies the test duration, pollutants to be measured and the test methods.
[A.A.C. R18-2-306.A.2]

4. The Permittee shall apply for a significant permit revision in accordance with A.A.C. R18-2-320 to use a fuel that is not listed in Condition VIII.A.1 above or to use a fuel percentage that is greater than listed in Condition VIII.A.1 above. The Permittee may be required to conduct performance testing to test the new fuel or the increased fuel percentage. Required performance tests may include, but not be limited to, any of the following:
[Permit No. M191365P1-99 Condition IV and A.A.C. R18-2-319.A.6]

Parameter/Pollutant	EPA Reference Method
Traverse Points	1
Velocity	2
Molecular Weight	3
Moisture Content	4
Total PM (Particulate Matter)	5
SO_2	6C
NO_x	7E
Sulfuric Acid Mist	8
CO - NDIR	10
H_2S Content of Fuel	11
Total Fluoride (Specific Ion Electrode)	13B
Total Reduced Sulfur (TRS)	15A/16A
Dioxin and Furan, Polynuclear Aromatic Hydrocarbons, and Polychlorinated Biphenyls	23
VOC	25 or 18/25A

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Parameter/Pollutant	EPA Reference Method
Metals	29
PM_{10} (in-stack)	201A
Condensable Particulate Matter	202
Chromium	306
Formaldehyde	316 or 320
HCl	321

5. Fuels Analysis

This Subsection is not based on a federal applicable requirement and is therefore, not federally enforceable.

[A.A.C. R18-2-306.B.2 and Significant Permit Revision No. 1000547 Condition IX]

a. All records of analyses provided by the fuel supplier concerning the higher heating value, sulfur content and hazardous air pollutants (HAPs) in the fuel shall be maintained onsite and available for review by ADEQ.

b. In the event the fuel supplier does not provide the analyses specified in Condition VIII.A.5.a above, the Permittee shall test or cause to be tested for higher heating value, sulfur content and HAPs (as defined in Clean Air Act 112(b)(1)) the first fuel delivery of coal, coke, diesel fuel, No. 2 Fuel Oil, Bunker C oil, or on-specification used oil fuel from each fuel supplier or mine location or oil refinery, the first delivery of wood chips from each supplier, and every month for shredded tires when shredded tires are used as fuel. The Permittee shall test these fuels as follows:

(1) Unless otherwise specified, all sample collection, sample preparation, and analyses performed or caused to be performed by the Permittee shall be conducted according to the current ASTM Standards or EPA Testing Methods.

(2) The heating value and the sulfur content shall be calculated based on vendor testing.

c. In the event the fuel supplier does not provide the analyses specified in Condition VIII.A.5.a above for on-specification used oil fuel, the Permittee shall cause to be tested such used oil fuel as follows:

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(1) Used oil fuel shall be field tested for total halogens, measured as chlorides, at a minimum, before it is unloaded into an onsite storage tank; the screening method used shall be Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-486, 3rd Edition, Method 9077 or a comparable method approved by ADEQ in writing prior to its use; those shipments that do not meet the appropriate used oil fuel specifications listed in A.R.S. § 49-801(B) shall be rejected.

(2) The following HAPs concentrations shall be measured for each onsite tank of fuel before it is used: Arsenic, Cadmium, Chromium, Lead, Polychlorinated Biphenyls (PCBs) and total halogens; those fuels that do not meet the appropriate used oil fuel specifications listed in A.R.S. § 49-801(A) (5) and A.R.S. § 49-801(B) shall not be fired in any kiln.

B. Secondary Materials (Raw Feed Materials) Utilization Procedures

This Subsection is not based on a federal applicable requirement and is therefore, not federally enforceable. The Permittee shall comply with the following:

[A.A.C. R18-2-306.B.2 and Significant Permit Revision No. 1000547 Condition IX]

1. "Secondary materials" are materials generated by a party other than the Permittee that are to be reprocessed or reused and which are rich in oxides of calcium, alumina, iron or silica. This definition does not include earthen ores mined exclusively for their oxide content where no extraction or beneficiation other than mining, crushing, screening, physical separation, or washing with water have occurred.

2. Pre-Acceptance Procedures: The Permittee shall require a completed and signed Alternate Raw Material Recycling Questionnaire with analyses and a representative sample of the secondary material from the generator. The Permittee shall re-analyze the sample for any analyses not performed by the generator, and evaluate the secondary material to determine whether the physical characteristics sufficiently compare with the generator description and the SDS supplied by the generator and to determine, based upon the information supplied by the generator or developed independently by the Permittee, if the secondary material is regulated as a hazardous waste under the Resource Conservation and Recovery Act and the Arizona Hazardous Waste Management Act (hereinafter collectively "RCRA"). If the secondary material is determined to be a hazardous waste regulated under RCRA, the Permittee shall not use the secondary material.

3. Acceptance Procedures: Before secondary materials can be accepted at the facility, the secondary material must be weighed unless accompanied by a certified weighmaster's ticket; the ticket must have the generator's name and an accurate material description. During unloading, the secondary material will be compared to the SDS and the Recycling Questionnaire and unloading will be suspended until any inaccuracies have

been resolved. The Permittee will also obtain a representative sample of the secondary material being unloaded.

4. All records concerning the Permittee's evaluation of secondary materials shall be maintained onsite and available for review by ADEQ.

IX. ALTERNATE RAW MATERIAL SCREENING ASSESSMENT FOR DIOXINS, FURANS AND PRECURSORS

The Permittee shall comply with the following Alternate Raw Materials Screening Assessment for new alternate raw materials.

[A.A.C. R18-2-306.A.2 and Condition I.P of Attachment "B" of Minor Permit Revision No. 43448]

A. General

1. This Section outlines a screening assessment designed to ensure that new alternate raw materials CalPortland Company considers for use at its Rillito cement plant do not contribute to dioxin and furan (D/F) emissions that might exceed the emission standard as identified in 40 CFR 63.1343(b). In effect, the screening assessment provides a means to assist in determining whether a new alternate raw material might be a change in operations that may adversely affect compliance with the applicable emission standard.

2. If the results of the screening assessment are below the screening levels identified in the attached table, the Permittee is free to use the material without conducting performance tests or further assessments. If any of the results are above the applicable screening levels, the Permittee would be required to conduct and pass a performance test in accordance with 40 CFR 63.1349(e) if it intends to use the alternate raw material.

3. Nothing in this screening assessment shall be construed to (1) limit ADEQ's authority to request a performance test under specific permit terms of this Permit, or any other specifically applicable requirements; or (2) provide an independent basis to request a performance test.

B. Screening Assessment Procedure

1. Applicability

[A.A.C. R18-2-306.A.2 and Condition I.P of Attachment "B" of Minor Permit Revision No. 43448]

a. This screening assessment will be performed for any "new" "alternate raw material".

"New" means an alternate raw material that has not been in use during a previously conducted performance test within the immediately preceding five years. Once the Permittee conducts an initial screening assessment or performance test with the alternate raw material, subsequent shipments of that alternate raw material would not require additional analysis unless the supplier informed

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the Permittee of a change in the supplier's process that might affect the concentration of the compounds listed in the attached table.

"Alternate raw material" is defined as a material generated by a party other than Rillito cement plant that is to be reprocessed or reused and which is rich in oxides of calcium, alumina, iron or silica. This definition does not include earthen ores where no extraction or beneficiation other than mining, crushing, screening, physical separation, or washing with water have occurred. This definition is equivalent to the definition of "Secondary material", defined in Permit M190310P1-00, Attachment B, Condition X.D.1, and used interchangeably therein with "alternate raw material".

b. Use of the screening assessment will not be required for earthen ores where no extraction or beneficiation other than mining, crushing, screening, physical separation, or washing with water have occurred.

c. If the Permittee wishes to use the material, the Permittee will provide to ADEQ for review the results of the screening assessment. The Permittee may use the material 30 calendar days after ADEQ receives the screening assessment unless, within that 30-day period, the Permittee receives written notice from ADEQ of its objection to the use of the material. ADEQ's written notice shall be deemed a final, appealable agency action as defined in A.R.S. § 41-1092(3).

d. Sampling will be performed on each new alternate raw material prior to its first use if it is fed with normal raw materials into the kiln. Materials fed directly into a hot zone in the kiln, such as the feed shelf between the kiln and calciner, will not require analysis because temperatures in these zones will instantaneously destroy any compounds listed in the table.

e. In addition, suppliers of all alternate raw materials being utilized at the facility will be required by contract to notify the Permittee, prior to shipment, of any change in their process that might affect the concentration of the compounds listed in the attached table. If a supplier so notifies the Permittee, the Permittee will perform the screening assessment on the alternate raw material that is the subject of the notification regardless of whether a previous screening assessment or performance test has been conducted on that alternate raw material. The Permittee will then follow the procedures set forth herein for using new alternate raw materials.

2. Selected Compounds

The compounds listed in the table were selected from 40 CFR Part 261, Appendix VIII, as compounds that could create an environment where a

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cement kiln could emit increased dioxin and furans (>0.20 toxicity equivalent (TEQ) ng/dscm @ 7% O_2, over 204°C) even if the air pollution control equipment is operated below pre-established temperature limits. Because the primary formation mechanism for dioxin and furan emissions is controlled by controlling the air pollution control device inlet temperature, only the identified compounds could be expected to cause increased dioxin and furan emissions under other conditions.

[A.A.C. R18-2-306.A.2 and Condition I.P of Attachment "B" Minor Permit Revision No. 43448]

3. Screening Levels

The screening levels in the table are conservative. The single level set on tetra through octa chlorinated Polychlorinated dibenzo-p-dioxins (PCDD)/ Polychlorinated dibenzo furans (PCDFs) represents a conservative calculation that assumes none of the dioxins are destroyed but may be reformed. In fact, the screening level is lower than the level of dioxins and furans found in typical urban soils.

A number of conservative factors were used to develop the screening level including:

- A conservative TEQ versus total PDCC/PCDF ratio;
- The assumption that 10% of the raw feed is the alternate raw material;
- The assumption that all PCDD/PCDFs entering the system exit the stack (data from the facility indicated a significant portion is actually destroyed); and
- The assumptions that background PCDD/PCDF emissions are up to half the maximum achievable control technology (MACT) emission limit.

Similarly, the screening level for Polychlorinated Biphenyls (PCBs) is well below the 50 ppm PCB limit established under Toxic Substances Control Act (TSCA). It is based on the experience of a cement kiln in Canada that accidentally used metal casting sand contaminated with PCBs. The screening level for the chlorinated phenols is based on the potential for these chlorinated phenols to contain up to 1 ppm dioxins and furans as well as their potential to form small amounts of dioxins and furans during thermal decomposition.

[A.A.C. R18-2-306.A.2 and Condition I.P of Attachment "B" Minor Permit Revision No. 43448]

4. Test Methods

Test methods listed for each compound are the most current EPA SW-846 methods. Older or alternative methods that can be demonstrated to provide quantitation at the recommended limit may also be used. All of the compounds identified can be detected at or below the screening levels

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using the recommended analytical methods. Screening levels are considered site specific for the Permittee. The Permittee may raise one or more of the screening levels in the future based on the results of further testing, upon review and approval by ADEQ.

[A.A.C. R18-2-306.A.2 and Condition I.P of Attachment "B" Minor Permit Revision No. 43448]

5. Procedure if Results are Above Screening Levels

If sampling demonstrates that a new alternate raw material is above the screening levels shown in the attached table and the Permittee intends to use the material, it must conduct a performance test in accordance with the requirements of 40 CFR 63.1349(e). The Permittee will provide prior notice of the test in accordance with 40 CFR 63.1349(e). Following the test, the Permittee will not use the new alternate raw material until it submits a notification of compliance status demonstrating that the performance was successful. If the performance test results are greater than the applicable emission standards, the Permittee will not use the new alternate raw material in its process.

[A.A.C. R18-2-306.A.2 and Condition I.P of Attachment "B" Minor Permit Revision No. 43448]

Compound Screening Levels

Compound (or compound class)	Analytical Method*	Screening Level*** (mg/kg)
Polychlorinated biphenyls	8082A	1
Heptachlorodibenzo-p-dioxins	8280B/8290A	$6x10^{-5}$**
Heptachlorodibenzofurans	8280B/8290A	$6x10^{-5}$**
Hexachlorodibenzo-p-dioxins	8280B/8290A	$6x10^{-5}$**
Hexachlorodibenzofurans	8280B/8290A	$6x10^{-5}$**
Octachlorodibenzo-p-dioxin	8280B/8290A	$6x10^{-5}$**
Octachlorodibenzofurans	8280B/8290A	$6x10^{-5}$**
Pentachlorodibenzo-p-dioxins	8280B/8290A	$6x10^{-5}$**
Pentachlorodibenzofurans	8280B/8290A	$6x10^{-5}$**
Tetrachlorodibenzo-p-dioxins	8280B/8290A	$6x10^{-5}$**
Tetrachlorodibenzofurans	8280B/8290A	$6x10^{-5}$**

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Tetrachlorophenol	8270D	0.66
Pentachlorophenol	8270D	0.66

* From SW-846, Third Edition, January 1998 Revision.
** Limit is total for all TCDDs-OCDDs and TCDF → OCDFs.
*** Based on 10% alternative raw material substitution.

X. UNCLASSIFIED SYSTEMS

A. Applicability

This Section is applicable to process sources identified in Section XIII of the Equipment List in Attachment "D."

B. Emission Limitations and Standards

1. Particulate Matter

a. The Permittee shall not cause, allow, or permit 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:

[PCC 17.16.430.A.1]

(1) 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:

$E = 3.59P^{0.62}$

Where:

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

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

(2) For 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:

$E = 17.31P^{0.16}$

Where "E" and "P" are defined as indicated in Condition X.B.1.a(1) above.

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b. For purposes of Condition X.B.1.a above, 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.

[PCC 17.16.430.B]

2. Opacity

a. The opacity of any plume or effluent from any existing, stationary, point source shall not be greater than 20%.

[A.A.C. R18-2-702.B.3 and PCC 17.16.130.B.3]

b. If the presence of uncombined water is the only reason for an exceedance of the visible emissions requirement in Condition X.B.2.a above, the exceedance shall not constitute a violation of the applicable opacity limit.

[A.A.C. R18-2-702.C and PCC 17.16.130.C]

C. Air Pollution Prevention Requirements

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, operate the following bin vent filters to minimize particulate matter emissions and comply with the applicable emission limitations and standards of Condition X.B above.

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

D. Monitoring, Recordkeeping, and Reporting Requirements

A certified Method 9 observer shall conduct the periodic opacity monitoring method specified in Condition I.A above of Attachment "B" on a monthly basis from the emission units subject to Section X when in operation.

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

XI. REGIONAL HAZE REQUIREMENTS

A. Applicability

This Section applies to the Iron Stockpile for the reduction of PM_{10} as required per the Regional Haze Rule.

B. Air Pollution Control Requirement

At all times, the Permittee shall operate and maintain *the Iron Stockpile three-sided windbreak in a manner consistent with safety and good air pollution control practices for minimizing emissions.*

[A.A.C. R18-2-306.A.2 and A.A.C. R18-2-331.A.3.e]
[Material Permit Conditions are indicated by underlines and italics]

C. Monitoring, Recordkeeping and Reporting Requirements

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1. The Permittee shall perform monthly inspections of the Iron Stockpile three-sided windbreak required by Condition XI.B to ensure it is in proper working condition.

2. The Permittee shall keep a record of the date of the inspection, the name of the inspector, and the results of the inspection. If corrective action was necessary, the Permittee shall record a description of the corrective action. [A.A.C. R18-2-306.A.3.c]

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ATTACHMENT "D": EQUIPMENT LIST

PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
I: QUARRY CRUSHER SYSTEM							
Truck Dump	Hopper	150 tons	1971	N/A	N/A	N/A	Att. B, Sec. III.C
B2-BC1	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B2-BF1	Belt Feeder	1200 tph	Pre August 1971	Stephens Adamson	N/A	N/A	Att. B, Sec. III.C
B2-IC1	Impact Crusher	1200 tph	2025	Hazemag	HPI 2022	1A 77388/9190 02926	Att. B, Sec. III.E
B2-PF1	Pan Feeder	1200 tph	Pre August 1971	Stephens Adamson	N/A	N/A	Att. B, Sec. III.C
B2-VG1	Vibrating Grizzly	1200 tph	2025	Deister	PSP-1712	2007037	Att. B, Sec. III.E
B3-BC1	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B3-BC2	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B3-BC3	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B3-BC4	Shuttle Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B3-VS1	Vibrating Screen	1200 tph	2003 (like-kind replacement)	METSO	8X20 SD	26A818	Att. B, Sec. III.C
B2-DC1	Dust Collector	N/A	Pre August 1971	Mikropul	2G3-96	70-H-1931	Att. B, Sec. III.C

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
B3-DC1	Dust Collector	N/A	Pre August 1971	Mikropul	1F3-24	70-H-1934	Att. B, Sec. III.C
B2-VS1	Dual Deck Screen	300 tph	2022	JCI	SS8202-38LP-D	TBD	Att. B, Sec. III.E
B2-BC2	Belt Conveyor	300 tph	2023	Goodfellow	36" x 60'	TBD	Att. B, Sec. III.E
B2-BC3	Belt Conveyor	1,000 tph	2022	Goodfellow	ADT3660	C10469	Att. B, Sec. III.E
B2-BC4	Belt Conveyor	200tph	2023	Goodfellow	48" x 28'	TBD	Att. B, Sec. III.E
B2-BC5	Belt Conveyor	100 tph	2023	Goodfellow	36" x 30'	TBD	Att. B, Sec. III.E
B2-BC6	Belt Conveyor	100 tph	2023	Goodfellow	36" x 460'	TBD	Att. B, Sec. III.E
B2-BC7	Belt Conveyor	1,000 tph	2025	Goodfellow	MDC7245	C100109	Att. B, Sec. III.E
B2-BC8	Belt Conveyor	1,000 tph	2025	Goodfellow	MDT3685	C100110	Att. B, Sec. III.E
B2-TS1	Radial Stacker	100 tph	2023	Goodfellow	36" x100'	TBD	Att. B, Sec. III.E
B2-DC2	Dust Collector	4,000 cfm	2023	Camcorp	7TR10X49	TBD	Att. B, Sec. III.E
B2-DC3	Dust Collector	12,000 cfm	2023	Camcorp	13TR10X169	TBD	Att. B, Sec. III.E
B2-DC4	Dust Collector	3,000 cfm	2025	Donaldson	DLMV 30/15	IG18764041 L001	Att. B, Sec. III.E
Various enclosed screw conveyor devices							
II: Overland Conveyor System							

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
B5-BC1	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B5-BC2	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B5-BC3	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B5-BC4	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B5-VF1 through B5-VF12	Vibrating Feeders	1200 tph	Pre August 1971	Eriez Magnetics	95A	RD4-109 to RD4-120	Att. B, Sec. III.C
B5-DC1	Dust Collector	N/A	Pre August 1971	Mikropul	36S-8-30	70-H-1935	Att. B, Sec. III.C
B5-DC2	Dust Collector	N/A	Pre August 1971	Mikropul	36S-8-30	70-H-1936	Att. B, Sec. III.C
B5-DC3	Dust Collector	N/A	Pre August 1971	Mikropul	36S-8-30	71-H-390	Att. B, Sec. III.C
III: Stacker/Reclaimer and Storage Area							
B7-BC1	Belt Conveyor	1200 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
B7-BC2	Belt Conveyor	1200 tph	Pre August 1971	MIAG	N/A	N/A	Att. B, Sec. III.C
B7-BC3	Stacker Boom Conveyor	1200 tph	Pre August 1971	MIAG	N/A	N/A	Att. B, Sec. III.C
B7-TS	Stacker	1200 tph	Pre August 1971	MIAG	N/A	N/A	Att. B, Sec. III.C
B8-BC1	Belt Conveyor	450 tph	Pre August 1971	N/A	N/A	N/A	Att. B, Sec. III.C
B8-BC1A	Belt Conveyor	500 tph	Pre August 1971	N/A	N/A	N/A	Att. B, Sec. III.C

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C2-BC4	Belt Conveyor	500 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
C2-TR1	Reclaimer	500 tph	Pre August 1971	MIAG	N/A	N/A	Att. B, Sec. III.C
B7-DC1	Dust Collector	N/A	Pre August 1971	Mikropul	80S-8-20	N/A	Att. B, Sec. III.C Att. B, Sec. III.E
B8-DC1	Dust Collector	N/A	Pre August 1971	Mikropul	80S-8-20	N/A	Att. B, Sec. III.C
B8-DC2	Dust Collector	N/A	Pre August 1971	Mikropul	80S-8-20	N/A	Att. B, Sec. III.C
IV: Roller Mill Feed Area							
C2-BC1	Belt Conveyor	460 tph	Pre August 1971	MIAG	N/A	N/A	Att. B, Sec. III.C
C2-BC2	Belt Conveyor	460 tph	Pre August 1971	MIAG	N/A	N/A	Att. B, Sec. III.C
C2-BC3	Belt Conveyor	460 tph	Pre August 1971	Rex Chain Belt	N/A	N/A	Att. B, Sec. III.C
C2-BC3-BF1	Belt Feeder	200 tph	Pre August 1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-BC3-MGT-BC	Belt Conveyor	N/A	2009	Eriez Magnetics	N/A	N/A	Att. C, Sec. VII
C2-BC7	Belt Conveyor	460 tph	2000	Terra Nova	N/A	N/A	Att. C, Sec. VII
C2-BE3	Bucket Elevator	460 tph	Pre August 1971	MIAG	N/A	N/A	Att. C, Sec. VII
C2-BE4	Bucket Elevator	460 tph	Pre August 1971	MIAG	N/A	N/A	Att. C, Sec. VII
C2-DR1	Drag Rake	100 tph	Pre August 1971	MIAG	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C2-DR2	Drag Rake	100 tph	Pre August 1971	MIAG	N/A	N/A	Att. C, Sec. VII
C2-SB7	Storage Bin	250 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB8	Storage Bin	250 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-BC1	Belt Conveyor	460 tph	2000	Terra Nova	N/A	N/A	Att. C, Sec. VII
D4-BE1	Bucket Elevator	100 tph	2000	Rexnord	2116M 34x64	250021	Att. C, Sec. VII
D4-BF1	Belt Feeder	100 tph	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-BS1	Belt Scale	460 tph	2000	Merrick	450	450-MC2-24295	Att. C, Sec. VII
D4-BS2	Belt Scale	460 tph	2000	Merrick	450	450-MC2-24296	Att. C, Sec. VII
D4-BS3	Belt Scale	460 tph	2009	Merrick	450	450-MC2-30310	Att. C, Sec. VII
D4-BS4	Belt Scale	460 tph	2000	Merrick	450	450-MC2-24298	Att. C, Sec. VII
D4-BS5	Belt Scale	460 tph	2000	Merrick	450	450-MC2-24299	Att. C, Sec. VII
D4-BS6	Belt Scale	460 tph	2006	Merrick	450	450-MC2-28245	Att. C, Sec. VII
D4-DR1	Drag Conveyor	100 tph	2000	Rexnord	N/A	N/A	Att. C, Sec. VII
D4-HOP	Hopper	50 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-SB3	Additive Bin	150 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-SB4	Additive Bin	150 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-SB5	Additive Bin	150 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
D4-SB6	Additive Bin	150 tons	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-VB1	Bin Vibrator	460 tph	2000	Vibra Screw	10'0" BA	2002188	Att. C, Sec. VII
D4-VB2	Bin Vibrator	460 tph	2000	Vibra Screw	10'0" BA	2002189	Att. C, Sec. VII
D4-VB4	Bin Vibrator	100 tph	2000	Vibra Screw	8'0" BA	N/A	Att. C, Sec. VII
D4-VB5	Bin Vibrator	100 tph	2000	Vibra Screw	8'0" BA	N/A	Att. C, Sec. VII
C2-DC1	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-1631	Att. B, Sec. III.C
C2-DC3	Dust Collector	N/A	2000	Amerex	RP-12-36-D6	N/A	Att. C, Sec. VII
D4-DC1	Dust Collector	N/A	2000	Amerex	RP-12-169-D6	N/A	Att. C, Sec. VII
D4-DC2	Dust Collector	N/A	2000	Amerex	RP-12-81-D6	N/A	Att. C, Sec. VII
V: Roller Mill							
D4-BE2	Bucket Elevator	460 tph	2000	Rexnord	1630-24108 34x64	250025	Att. C, Sec. VII
D4-CC1	Cyclone	460 tph	2000	Polysius	Sepol RMR 410	N/A	Att. C, Sec. VII
D4-CC2	Cyclone	460 tph	2000	Polysius	N/A	N/A	Att. C, Sec. VII
D4-CC3	Cyclone	460 tph	2000	Polysius	N/A	N/A	Att. C, Sec. VII
D4-CC4	Cyclone	460 tph	2000	Polysius	N/A	N/A	Att. C, Sec. VII
D4-RM1	Roller Mill	460 tph	2000	Polysius Quadropol	RMR 45/23	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
D4-SB1	Storage Bin	460 tph	2000	N/A	N/A	N/A	Att. C, Sec. VII
D4-SS1	Separator	460 tph	2000	Polysius	Sepol RMR 410	N/A	Att. C, Sec. VII
D4-VF1	Vibrating Feeder	460 tph	2000	Kenergy	Sepol RMR 410	KDF-6447	Att. C, Sec. VII
Various air slide devices							
Various enclosed screw conveyor devices							
VI: Homogenizing and Kiln Feed Silos							
F2-BE1	Bucket Elevator	300 tph	1971, 2002	Rexnord	N/A	N/A	Att. C, Sec. VII
F2-SB1	Homogenizing Silo	2400 tons	Post August 1971	Fuller	N/A	N/A	Att. C, Sec. VII
F2-SB2	Kiln Dust Bin	300 tons	2015	TBD	TBD	TBD	Att. C, Sec. VII
F2-BE2	Bucket Elevator	40 tph	2015	TBD	TBD	TBD	Att. C, Sec. VII
F2-PS-BE1	Bucket Elevator	100 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
F3-BE1	Bucket Elevator	250 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
F3-SB1	Kiln Feed Storage Silo	2600 tons	Post August 1971	N/A	N/A	N/A	Att. C, Sec. VII
F3-SB2	Kiln Feed Storage Silo	2600 tons	Post August 1971	N/A	N/A	N/A	Att. C, Sec. VII
F2-DC1	Dust Collector	N/A	2002	Amerex	N/A	N/A	Att. C, Sec. VII
F2-DC4	Dust Collector	N/A	1971	Mikropul	64S-8-20	71-H-391	Att. C, Sec. VII
F2-SB2-DC	Dust Collector	2700 cfm	2015	TBD	TBD	TBD	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
F3-DC1	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-392	Att. C, Sec. VII
F3-DC2	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-393	Att. C, Sec. VII
Various air slide devices							
Various enclosed screw conveyor devices							
VII: Raw Feed Materials to Rock Storage							
B9-BC1	Belt Conveyor	500 tph	1949	N/A	N/A	N/A	Att. B, Sec. III.C
B9-BC2	Belt Conveyor	500 tph	1949	N/A	N/A	N/A	Att. B, Sec. III.C
B9-BC3	Belt Conveyor	500 tph	1949	Stephens Adamson	5-S4	N/A	Att. B, Sec. III.C
B9-BC4	Belt Conveyor	500 tph	1949	N/A	N/A	N/A	Att. B, Sec. III.C
B9-BC4-BF	Belt Feeder	50 tph	2000	N/A	N/A	N/A	Att. B, Sec. III.C
B9-BC4-BFHOP	Hopper	50 tph	2000	N/A	N/A	N/A	Att. B, Sec. III.C
B9-BC6	Belt Conveyor	500 tph	N/A	N/A	N/A	N/A	Att. B, Sec. III.C
B9-IC	Impact Crusher	500 tph	1949	Pennsylvania Crusher	CF-15-50	1765	Att. B, Sec. III.C
B9-PF1	Pan Conveyor	500 tph	1949	N/A	N/A	N/A	Att. B, Sec. III.C
B9-VS1	Vibrating Screen	500 tph	2009 (like-kind replacement)	General Kinematics	FRC 72" X	C09904-01	Att. B, Sec. III.C
B9-VS2	Vibrating Screen	500 tph	1948	Hewitt Robbins	N/A	N/A	Att. B, Sec. III.C

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
Crusher Hopper	Hopper	500 tph	1949	N/A	N/A	N/A	Att. B, Sec. III.C
B9-DC1	Dust Collector	N/A	1971, 2001	Mikropul	N/A	N/A	Att. B, Sec. III.C
B9-DC2	Dust Collector	N/A	1985	Mikropul	80F3-10	855192H1	Att. B, Sec. III.C
B9-DC3	Dust Collector	N/A	1985	Mikropul	80F2-10	855193H1	Att. B, Sec. III.C
B9-DC5	Dust Collector	N/A	1985	Mikropul	36S-8-30	71-H-1622	Att. B, Sec. III.C
VIII: Raw Grinding - AC Area							
AC-BC1	Belt Conveyor	100 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC-BE1	Bucket Elevator	100 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC-BS1	Belt Scale	10 tph	1996	Merrick	450	450-MC2-22187	Att. C, Sec. VII
AC-BS2	Belt Scale	100 tph	1996	Merrick	450	450-MC2-22188	Att. C, Sec. VII
AC-BS3	Belt Scale	100 tph	1996	Merrick	450	450-MC2-22189	Att. C, Sec. VII
AC-BS4	Belt Scale	100 tph	1996	Merrick	450	450-MC2-22190	Att. C, Sec. VII
AC-DR1	Drag Conveyor	100 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC1 Mill	Mill	25 tph	1949	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
AC1-BE1	Bucket Elevator	25 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC1-BS1	Belt Scale	25 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
AC1-SB	Feed Bin	30 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC1-SS	Separator	25 tph	1949	Sturtevant	N/A	N/A	Att. C, Sec. VII
AC2 Mill	Mill	25 tph	1949	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
AC2-BE1	Bucket Elevator	25 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC2-BS1	Belt Scale	25 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC2-BS1-VF1	Vibrating Feeder	25 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC2-SB	Feed Bin	30 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
AC2-SS	Separator	25 tph	1949	Sturtevant	N/A	N/A	Att. C, Sec. VII
AC3 Mill	Mill	25 tph	1951	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
AC3-BE1	Bucket Elevator	25 tph	1951	N/A	N/A	N/A	Att. C, Sec. VII
AC3-BS1	Belt Scale	25 tph	1951	Merrick	N/A	N/A	Att. C, Sec. VII
AC3-BS1-VF1	Vibrating Feeder	25 tph	1951	N/A	N/A	N/A	Att. C, Sec. VII
AC3-SB	Feed Bin	30 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
AC3-SS	Separator	25 tph	1951	Sturtevant	N/A	N/A	Att. C, Sec. VII
AC4 Mill	Mill	25 tph	1955	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
AC4-BE1	Bucket Elevator	25 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
AC4-BS1	Belt Scale	25 tph	1997	Merrick	450	450-MC2-23019	Att. C, Sec. VII
AC4-SB	Feed Bin	18 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
AC4-SS	Separator	25 tph	1955	Sturtevant	N/A	N/A	Att. C, Sec. VII
AC-DC3	Dust Collector	N/A	1981	Mikropul	221S-8-20	82129	Att. C, Sec. VII
AC1-DC1	Dust Collector	N/A	1981	Mikropul	221S-10-20	7844H1	Att. C, Sec. VII
AC2-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-20	78444H2	Att. C, Sec. VII
AC3-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-20	78444H3	Att. C, Sec. VII
AC4-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-20	78444H4	Att. C, Sec. VII
Various enclosed screw conveyor devices.							
Various air slide devices.							
IX: Proportioning Silos							
AC-A1	Alleviator	100 tph	2000	N/A	N/A	N/A	Att. C, Sec. VII
AC-BE2	Bucket Elevator	100 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
F2-POD	Pneumatic Conveyance System	125 tph	2000	MODCO	N/A	N/A	Att. C, Sec. VII
F2-PS-SB1	Storage Bin	280 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB2	Storage Bin	280 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB3	Storage Bin	280 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB4	Storage Bin	280 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB5	Storage Bin	280 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
F2-PS-SB6	Storage Bin	280 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB7	Storage Bin	280 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB8	Storage Bin	280 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB9	Storage Bin	280 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB10	Storage Bin	280 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB11	Storage Bin	280 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-SB12	Storage Bin	280 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
AC-BE2-DC	Dust Collector	N/A	2000	Mikropul	64S-8-20	76615H1	Att. C, Sec. VII
AC-DC1	Dust Collector	N/A	2000	N/A	N/A	N/A	Att. C, Sec. VII
F2-PS-DC1	Dust Collector	N/A	1980	Mikropul	10/8/1930	73-H-897	Att. C, Sec. VII
F2-PS-DC2	Dust Collector	N/A	1980	Mikropul	10/8/1930	N/A	Att. C, Sec. VII
F2-PS-DC3	Dust Collector	N/A	N/A	Mikropul	N/A	N/A	Att. C, Sec. VII
Various enclosed screw conveyor devices							
Various pneumatic conveying devices							
X: Kilns 1, 2, and 3 Feed Silos							
F3-KS-BE1	Bucket Elevator	100 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SB	Storage Bin	15 tons	1992	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
F3-KS-SB1	Silo	575 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SB2	Silo	575 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SB3	Silo	575 tons	1949	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SB4	Silo	575 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SB5	Silo	575 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SB6	Silo	575 tons	1951	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-SCF	Screw Feeder	100 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
F3-KS-DC1	Dust Collector	N/A	1974	Mikropul	25S-8-20B	N/A	Att. C, Sec. VII
Various enclosed screw conveyor devices							
XI: Kilns 1, 2, and 3							
H3-K1-K	Rotary Kiln	19 tph	1949	Allis Chalmers	N/A	N/A	Att. C, Sec. VI
H3-K2-K	Rotary Kiln	19 tph	1951	Allis Chalmers	N/A	N/A	Att. C, Sec. VI
H3-K3-K	Rotary Kiln	19 tph	1955	FL Smidth	N/A	N/A	Att. C, Sec. VI
H4-K1-DBE1	Bucket Elevator	30 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K1-FBE1	Bucket Elevator	30 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H4-K2-DBE1	Bucket Elevator	30 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K2-FBE1	Bucket Elevator	30 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K3-DBE1	Bucket Elevator	56 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K3-FBE1	Bucket Elevator	30 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K1-CC	Cyclone	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K2-CC	Cyclone	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-K3-CC	Cyclone	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
Kiln #1 Bin	Kiln Feed Bin	92 tons	1949	NA	N/A	N/A	Att. C, Sec. VII
Kiln #2 Bin	Kiln Feed Bin	92 tons	1951	NA	N/A	N/A	Att. C, Sec. VII
Kiln #3 Bin	Kiln Feed Bin	92 tons	1955	NA	N/A	N/A	Att. C, Sec. VII
H5-1-SCF	Screw Feeder	19 tph	1978	N/A	N/A	N/A	Att. C, Sec. VII
H5-2-SCF	Screw Feeder	19 tph	1978	N/A	N/A	N/A	Att. C, Sec. VII
H5-3-SCF1	Screw Feeder	19 tph	1978	N/A	N/A	N/A	Att. C, Sec. VII
H5-5 Dust Bin	Dust Bin	100 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
H5-5-FP1	Fuller Kinyon Dust Pump	30 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H5-5-GB-BE1	Bucket Elevator	56 tph	1978	Rexnord	N/A	N/A	Att. C, Sec. VII
H5-5-SCF1	Screw Feeder	19 tph	1978	N/A	N/A	N/A	Att. C, Sec. VII
H4-K1-DC	Dust Collector	N/A	N/A	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H4-K2-DC	Dust Collector	N/A	1974	Mikropul	25S-8-20B	73-H-901	Att. C, Sec. VII
H4-K3-DC	Dust Collector	N/A	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H5-5-DC1	Dust Collector	N/A	1978	Mikropul	36S-8-30	N/A	Att. C, Sec. VII
H5-5-DC2	Dust Collector	N/A	1978	Mikropul	36S-8-30	N/A	Att. C, Sec. VII
H5-5-GB	Dust Collector	N/A	1978	ICA	5535 S12	N/A	Att. C, Sec. VI
Various enclosed screw conveyor devices							
Various air slide devices							
Various pneumatic conveying devices							
XII. Clinker Coolers 1, 2, and 3							
H2-KB1	Belt Conveyor	56 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H2-KB4	Belt Conveyor	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H2-K1-BE1	Bucket Elevator	19 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
H2-K2-BE1	Bucket Elevator	19 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
H2-K3-BE1	Bucket Elevator	19 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
H2-QC1	Clinker Cooler	19 tph	1949	Fuller	N/A	N/A	Att. C, Sec. VI
H2-QC1-DR1	Drag Conveyor	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H2-QC2	Clinker Cooler	19 tph	1951	Fuller	N/A	N/A	Att. C, Sec. VI
H2-QC2-DR1	Drag Conveyor	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H2-QC3	Clinker Cooler	19 tph	1955	Fuller	N/A	N/A	Att. C, Sec. VI
H2-QC3-DR1	Drag Conveyor	19 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H2-3-DC-BE	Bucket Elevator	N/A	1974	N/A	N/A	N/A	Att. C, Sec. VII
H2-KB1-DC	Dust Collector	N/A	1981	N/A	N/A	N/A	Att. C, Sec. VII
H2-KB3-DC	Dust Collector	N/A	1982	WH/FRYE	N/A	N/A	Att. C, Sec. VII
H2-1-DC	Dust Collector	N/A	1974	WH/FRYE	108	N/A	Att. C, Sec. VI
H2-2-DC	Dust Collector	N/A	1974	WH/FRYE	108	N/A	Att. C, Sec. VI
H2-3-DC	Dust Collector	N/A	1974	WH/FRYE	108	N/A	Att. C, Sec. VI
Various enclosed screw conveyor devices							
XIII: Preheater and Kiln 4							
H3-K4-BC1	Belt Conveyor	N/A	1989	N/A	N/A	N/A	Att. C, Sec. VII
H3-K4-BE1	Bucket Elevator	207 tph	1989	N/A	N/A	N/A	Att. C, Sec. VII
H3-K4-HOP	Hopper	N/A	1989	N/A	N/A	N/A	Att. C, Sec. VII
H3-K4-K	Rotary Kiln	207 tph	1971	Allis Chalmers	N/A	N/A	Att. C, Sec. VI
H3-K4-SCF1	Screw Feeder	25 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H3-K4-WF1	Fuel Feeder	10 tph	N/A	Pfister	N/A	N/A	Att. C, Sec. VII
H3-K4-WF1-SB	Storage Bin	10 tons	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H3-K4-WF2	Fuel Feeder	10 tph	N/A	Pfister	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H3-K4-WF2-SB	Storage Bin	10 tons	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-FB1	Kiln 4 Raw Mix Bin	15 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
H4-BS	Weighbelt Feeder	300 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
H4-BE1	Bucket Elevator	460 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
H4-BE2	Bucket Elevator	460 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
H4-CC1A	Cyclone	150 tph	1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-CC1B	Cyclone	150 tph	1971, 1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-CC2A	Cyclone	150 tph	1971, 1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-CC2B	Cyclone	150 tph	1971, 1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-CC3A	Cyclone	150 tph	1971, 1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-CC3B	Cyclone	150 tph	1971, 1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-CC4A	Cyclone	150 tph	1971, 1992	N/A	N/A	N/A	Att. C, Sec. VII
H4-RF2	Rotary Airlock	150 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
H4-RF3	Rotary Airlock	150 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
H4-SB-KS	Raw Mix Bin	25 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
H5 Dust Bin	Dust Bin	100 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
H5-BE1	Bucket Elevator	75 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H5-FP1	Fuller Kinyon Pump	27 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
H5-FP2	Fuller Kinyon Pump	27 tph	1989	N/A	N/A	N/A	Att. C, Sec. VII
Preheater	Preheater	207 tph	1971	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
Preheater	Calciner	207 tph	1985	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
H3-K4-DC1	Dust Collector	N/A	1990	Mikropul	N/A	N/A	Att. C, Sec. III.D
H3-K4-DC2	Dust Collector	N/A	1990	Mikropul	N/A	N/A	Att. C, Sec. III.D
H4-DC1	Dust Collector	N/A	1971	Mikropul	25S-8-30B	79318	Att. C, Sec. VII
H5-DC1	Dust Collector	1,300 cfm	2010	DCL	VMV-375	N/A	Att. C, Sec. VII
H5-GB	Dust Collector	N/A	1972	Western Precipitation	CHP-SP-N	N/A	Att. C, Sec. VI
H7-UR	SNCR System	10 gpm	2018	N/A	N/A	N/A	Att. C, Sec. VI
H7-LJ-SB1	Lime Bin	35 tons	2020	NOL-TEC	N/A	N/A	Att. C, Sec. X
H7-LJ-SB1-DC	Lime Bin Vent	N/A	2020	NOL-TEC	238	N/A	Att. C, Sec. X
H7-LJ	Lime Injection System	700 lb/hr	2020	NOL-TEC	N/A	N/A	Att. C, Sec. VI
TBD	Dust Collector	5,000 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Dust Collector	5,000 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Dust Collector	5,000 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Dust Collector	5,000 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
TBD	Dust Collector	5,000 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Load Cell Hopper	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Drum Magnet	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. VII
Various enclosed screw conveyor devices							
XIV: Clinker Cooler 4							
H2-BE1	Bucket Elevator	207 tph	2003	N/A	N/A	N/A	Att. C, Sec. VII
H2-DR1	Drag Conveyor	207 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
H2-PF1	Pan Feeder	207 tph	2000	Rexnord	N/A	N/A	Att. C, Sec. VII
H2-PF2	Pan Feeder	207 tph	2026	TBD	TBD	TBD	Att. C, Sec. VII
TBD	Hopper	15 tph	TBD	TBD	TBD	TBD	Att. C, Sec VII
H2-BC2	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. C, Sec VII
H2-BC3	Belt Conveyor	207 tph	TBD	TBD	TBD	TBD	Att. C, Sec. VII
H2-PF2-DG2	Slide Valve	207 tph	TBD	TBD	TBD	TBD	N/A

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H2-QC4	Clinker Cooler	207 tph	1971/2016*	Fuller/ FLSmidth	306X343	N/A	Att. C, Sec. VI
H2-SB1	Storage Bin	100 tons	2003	N/A	N/A	N/A	Att. C, Sec. VII
H2-DC1	Dust Collector	5,000 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
H2-DC2	Dust Collector	7,500 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
H2-DC3	Dust Collector	N/A	2003	Amerex	RP-12-9-D6	N/A	Att. C, Sec. VII
H2-DC4	Dust Collector	1,800 acfm	TBD	TBD	TBD	TBD	Att. C, Sec. VII
H2-DC5	Dust Collector	N/A	TBD	TBD	TBD	TBD	Att. C, Sec. VII
H2-GB	Dust Collector	N/A	1972	Wheelabrator	126	A-125748	Att. C, Sec. VI
Various enclosed screw conveyor devices							
*Clinker Cooler H2-QC4 rebuilt in 2016							
XV: Clinker/Gypsum Transport and Finish Mill Feed Bins							
C2-BC5	Belt Conveyor	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
C2-BC6	Belt Conveyor	155 tph	1977	N/A	N/A	N/A	Att. C, Sec. VII
C2-BC6A	Belt Conveyor	155 tph	1977	N/A	N/A	N/A	Att. C, Sec. VII
C2-BC8	Belt Conveyor	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
C2-BC9	Belt Conveyor	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
C2-BC10	Belt Conveyor	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
C2-BC11	Belt Conveyor	155 tph	1977	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C2-BC11A	Belt Conveyor	155 tph	1977	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB1	Storage Bin	360 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB2	Storage Bin	360 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB3	Storage Bin	360 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB4	Storage Bin	360 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB5	Storage Bin	360 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-SB6	Storage Bin	360 tons	1971	N/A	N/A	N/A	Att. C, Sec. VII
C2-VF1	Vibrating Feeder	155 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
D2-BC1	Belt Conveyor	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
D2-BC2	Belt Conveyor	155 tph	2001	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
D2-BC6	Belt Conveyor	155 tph	2001	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
D2-BS1	Belt Scale	155 tph	1971	Merrick	430	WLL9699	Att. C, Sec. VII
D2-BS2	Belt Scale	155 tph	1971	Merrick	430	WLL9696	Att. C, Sec. VII
D2-BS3	Belt Scale	155 tph	1971	Merrick	430	WLL9701	Att. C, Sec. VII
D2-BS4	Belt Scale	155 tph	1971	Merrick	430	WLL9698	Att. C, Sec. VII
D2-BS5	Belt Scale	155 tph	1971	Merrick	430	WLL9700	Att. C, Sec. VII
D2-BS6	Belt Scale	155 tph	1971	Merrick	430	WLL9697	Att. C, Sec. VII
C2-DC2	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-632	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C2-DC4	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-1622	Att. C, Sec. VII
C2-DC5	Dust Collector	N/A	1971	Mikropul	25S-8-30	71-H-394	Att. C, Sec. VII
C2-DC6	Dust Collector	N/A	1971	Mikropul	25S-8-30	71-H-395	Att. C, Sec. VII
C2-DC7	Dust Collector	N/A	1971	Mikropul	25S-8-30	71-H-396	Att. C, Sec. VII
C2-DC8	Dust Collector	N/A	1971	Mikropul	25S-8-30	71-H-397	Att. C, Sec. VII
C2-DC9	Dust Collector	N/A	1971	Mikropul	25S-8-30	71-H-398	Att. C, Sec. VII
C2-DC10	Dust Collector	N/A	1971	Mikropul	25S-8-30	71-H-399	Att. C, Sec. VII
C2-DC11	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-633	Att. C, Sec. VII
C2-DC12	Dust Collector	N/A	1986	Mikropul	25S-10-30	870085H1	Att. C, Sec. VII
C2-DC13	Dust Collector	N/A	1986	Mikropul	25S-10-30	870085H2	Att. C, Sec. VII
D2-DC1	Dust Collector	N/A	1971	Mikropul	1F2	71-H-816	Att. C, Sec. VII
D2-DC3	Dust Collector	N/A	1971	Mikropul	36S-8-30	71-H-822	Att. C, Sec. VII
D2-DC5	Dust Collector	1,433 cfm	2011	Donaldson	CPV-4	3219532-1	Att. C, Sec. VII
D2-DC6	Dust Collector	1,433 cfm	2011	Donaldson	CPV-4	3219532-2	Att. C, Sec. VI
D2-DC7	Dust Collector	1,433 cfm	2011	Donaldson	CPV-4	3219532-3	Att. C, Sec. VI
Various enclosed screw conveyor devices.							
XVI: Finish Milling - CM Area							
CM-BC1	Belt Conveyor	100 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM-BE1	Bucket Elevator	60 tph	1969	N/A	N/A	N/A	Att. C, Sec. VII
CM-BE4	Bucket Elevator	60 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM-BS1	Belt Scale	100 tph	1996	Merrick	450	450-MC2-22296	Att. C, Sec. VII
CM-BS2	Belt Scale	15 tph	1996	Merrick	450	450-MC2-22295	Att. C, Sec. VII
CM-BS3	Belt Scale	15 tph	2004	N/A	N/A	N/A	Att. C, Sec. VII
CM-DR	Drag Conveyor	60 tph	1996	Kase	N/A	D-96H40-01	Att. C, Sec. VII
CM-DR1	Drag Conveyor	60 tph	1959	N/A	N/A	N/A	Att. C, Sec. VII
CM-DR2	Drag Conveyor	60 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM-FP1	Pneumatic Conveyor	20 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM-FP2	Pneumatic Conveyor	35 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM-FP3	Pneumatic Conveyor	69 tph	1969	Fuller	200M, 110	200-M-98-10235	Att. C, Sec. VII
CM-MA-BIN1	Storage Silo	100 tons	1970	N/A	N/A	N/A	Att. C, Sec. VII
CM-MA-BIN2	Storage Silo	100 tons	1970	N/A	N/A	N/A	Att. C, Sec. VII
CM-MA-BIN3	Storage Silo	230 tons	1970	N/A	N/A	N/A	Att. C, Sec. VII
CM-MA-SCF1	Screw Feeder	69 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM-MA-SCF2	Screw Feeder	69 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM-MA-SCF3	Screw Feeder	69 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM1-BE1	Bucket Elevator	10 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM1-BS1	Belt Scale	10 tph	1998	Merrick	450	450-MC2-23473	Att. C, Sec. VII
CM1-BS1-VF1	Vibrating Feeder	10 tph	1951	N/A	N/A	N/A	Att. C, Sec. VII
CM1-M	Mill	10 tph	1949	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
CM1-SB	Storage Bin	N/A	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM1-SS	Separator	10 tph	1949	Sturtevant	N/A	N/A	Att. C, Sec. VII
CM2-BE1	Bucket Elevator	10 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM2-BS1	Belt Scale	10 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM2-BS1-VF1	Vibrating Feeder	10 tph	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM2-M	Mill	10 tph	1949	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
CM2-SB	Storage Bin	N/A	1949	N/A	N/A	N/A	Att. C, Sec. VII
CM2-SS	Separator	10 tph	1949	Sturtevant	N/A	N/A	Att. C, Sec. VII
CM3-BE1	Bucket Elevator	10 tph	1951	N/A	N/A	N/A	Att. C, Sec. VII
CM3-BS1	Belt Scale	10 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM3-BS1-VF1	Vibrating Feeder	10 tph	1951	N/A	N/A	N/A	Att. C, Sec. VII
CM3-M	Mill	10 tph	1951	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
CM3-SB	Storage Bin	N/A	1951	N/A	N/A	N/A	Att. C, Sec. VII
CM3-SS	Separator	10 tph	1951	Sturtevant	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM4-BE1	Bucket Elevator	10 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM4-BS1	Belt Scale	10 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM4-BS1-VF1	Vibrating Feeder	10 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM4-M	Mill	10 tph	1955	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
CM4-SB	Storage Bin	N/A	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM4-SS	Separator	10 tph	1955	Sturtevant	N/A	N/A	Att. C, Sec. VII
CM5-BE1	Bucket Elevator	10 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM5-BS1	Belt Scale	10 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM5-BS1-VF1	Vibrating Feeder	10 tph	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM5-M	Mill	10 tph	1955	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
CM5-SB	Storage Bin	N/A	1955	N/A	N/A	N/A	Att. C, Sec. VII
CM5-SS	Separator	10 tph	1955	Sturtevant	N/A	N/A	Att. C, Sec. VII
CM6-BE1	Bucket Elevator	10 tph	1956	N/A	N/A	N/A	Att. C, Sec. VII
CM6-BS1	Belt Scale	10 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM6-M	Mill	10 tph	1960	Allis Chalmers	N/A	N/A	Att. C, Sec. VII
CM6-SB	Storage Bin	N/A	1960	N/A	N/A	N/A	Att. C, Sec. VII
CM6-SS	Separator	10 tph	1960	Sturtevant	N/A	N/A	Att. C, Sec. VII
CM6-BS1-VF1	Vibrating Feeder	10 tph	1960	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM7-BC1	Belt Conveyor	69 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
CM7-BE1	Bucket Elevator	69 tph	1969	Rexnord	N/A	N/A	Att. C, Sec. VII
CM7-BE2	Bucket Elevator	69 tph	1998	Rexnord	2120M-01	G33315	Att. C, Sec. VII
CM7-BS1	Belt Scale	69 tph	2003	N/A	N/A	N/A	Att. C, Sec. VII
CM7-BS1-VF1	Vibrating Feeder	69 tph	1969	N/A	N/A	N/A	Att. C, Sec. VII
CM7-BS2	Belt Scale	69 tph	2009	Merrick	465	465-MC3-30848	Att. C, Sec. VII
CM7-BS3	Belt Scale	69 tph	1998	Merrick	465	465-MC3-30849	Att. C, Sec. VII
CM7-CX	Mill Cooler	69 tph	1969	Fuller	N/A	N/A	Att. C, Sec. VII
CM7-M	Mill	69 tph	1969	Fuller	N/A	B11915	Att. C, Sec. VII
CM7-RP1	Roll Crusher	69 tph	1969	N/A	N/A	N/A	Att. C, Sec. VII
CM7-RP2	Roll Crusher	69 tph	1969	N/A	N/A	N/A	Att. C, Sec. VII
CM7-SS	Separator	69 tph	1997	Polysius	185/0	N/A	Att. C, Sec. VII
CM7 Clinker Bin	Storage Bin	N/A	1969	N/A	N/A	N/A	Att. C, Sec. VII
CM7 Gypsum Bin	Storage Bin	N/A	1969	N/A	N/A	N/A	Att. C, Sec. VII
CM7 Limestone Bin	Storage Bin	N/A	1983	N/A	N/A	N/A	Att. C, Sec. VII
CM1-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-TR	79287	Att. C, Sec. VII
CM2-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-TR	72289	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM3-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-TR	80295	Att. C, Sec. VII
CM4-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-TR	79288	Att. C, Sec. VII
CM5-DC1	Dust Collector	N/A	1980	Mikropul	221S-10-TR	80296	Att. C, Sec. VII
CM6-DC1	Dust Collector	N/A	1979	Mikropul	221S-10-TR	79290	Att. C, Sec. VII
CM7-DC1	Dust Collector	N/A	1997	Amerex	RP-12-240, D6	1597-100	Att. C, Sec. VII
CM7-DC2	Dust Collector	N/A	1999	Amerex	RP-12-90	1597	Att. C, Sec. VII
CM7-DC3	Product Collector	N/A	1997	Amerex	RP-12-675, D6	1597-102	Att. C, Sec. VII
CM-DC4	Dust Collector	N/A	1982	Mikropul	221S-8-20	82127H1	Att. C, Sec. VII
CM-DC5	Dust Collector	N/A	1979	Mikropul	512K8	78416	Att. C, Sec. VII
CM-MA-DC1	Dust Collector	N/A	1970	Mikropul	16S-8-30	270-H-250	Att. C, Sec. VII
Various enclosed screw conveyor devices							
Various airslide devices							
Various pneumatic conveying devices							
XVII: Finish Milling - D2 Area							
D2-FP1	Pneumatic Pump	155 tph	2001	Fuller	N/A	N/A	Att. C, Sec. VII
D2-1-BC1	Belt Conveyor	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
D2-1-BE3	Bucket Elevator	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
D2-1-BE4	Bucket Elevator	155 tph	1971	Rex Chain Belt	N/A	N/A	Att. C, Sec. VII
D2-1-M	Mill	155 tph	1971	Allis Chalmers	N/A	B-16786	Att. C, Sec. VII
D2-1-SS	Separator	155 tph	2001	Polysius	Sepol 290	N/A	Att. C, Sec. VII
D2-PC	Product Collector	N/A	2001	N/A	N/A	N/A	Att. C, Sec. VII
D2-DC4	Dust Collector	N/A	2001	N/A	N/A	N/A	Att. C, Sec. VII
D2-1-DC1	Dust Collector	N/A	1975	Mikropul	283-96	71-H-612	Att. C, Sec. VII
Various airslide devices							
XVIII: Finish Milling - D3 Area							
D3-1-AS5B-MT	Material Trap	150 tph	1998	Polysius	N/A	N/A	Att. C, Sec. VII
D3-1-BC1	Belt Conveyor	150 tph	1987	FEECO	N/A	N/A	Att. C, Sec. VII
D3-1-BC2	Belt Conveyor	150 tph	1992	FEECO	N/A	N/A	Att. C, Sec. VII
D3-1-BC3	Belt Conveyor	150 tph	1992	FEECO	N/A	N/A	Att. C, Sec. VII
D3-1-BC4	Belt Conveyor	150 tph	1992	FEECO	N/A	N/A	Att. C, Sec. VII
D3-1-BC5	Belt Feeder	15 tph	2004	Schenck	N/A	N/A	Att. C, Sec. VII
D3-1-BC5-HOP	Hopper	150 tons	2004	N/A	N/A	N/A	Att. C, Sec. VII
D3-1-BE1	Bucket Elevator	450 tph	1987	Rexnord	N/A	N/A	Att. C, Sec. VII
D3-1-BE2	Bucket Elevator	150 tph	1974	Rexnord	N/A	N/A	Att. C, Sec. VII
D3-1-BE3	Bucket Elevator	150 tph	1974	Rexnord	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
D3-1-BE4	Bucket Elevator	150 tph	1974	Rexnord	N/A	N/A	Att. C, Sec. VII
D3-1-BE5	Bucket Elevator	150 tph	1987	Rexnord	N/A	N/A	Att. C, Sec. VII
D3-1-BS1	Belt Scale	150 tph	1988	Thayer	N/A	N/A	Att. C, Sec. VII
D3-1-BS2	Belt Scale	150 tph	1974	Merrick	N/A	N/A	Att. C, Sec. VII
D3-1-CX	Cement Cooler	150 tph	1974	Fuller	N/A	N/A	Att. C, Sec. VII
D3-1-FP1	Pneumatic Pump	150 tph	1987	Fuller	N/A	N/A	Att. C, Sec. VII
D3-1-HRP1	Roll Press	150 tph	1987	Polysius	N/A	450-4	Att. C, Sec. VII
D3-1-HRP2	Roll Press	150 tph	1987	Polysius	N/A	N/A	Att. C, Sec. VII
D3-1-M	Finish Mill	150 tph	1974	Allis Chalmers	N/A	B40131	Att. C, Sec. VII
D3-1-RS1	Rotary Screen	150 tph	2006	Vroom	N/A	N/A	Att. C, Sec. VII
D3-1-SB1	Storage Bin	150 tph	1974	N/A	N/A	N/A	Att. C, Sec. VII
D3-1-SB2	Storage Bin	150 tph	1974	N/A	N/A	N/A	Att. C, Sec. VII
D3-1-SS	Separator	150 tph	1999	Polysius	Sepol 290	N/A	Att. C, Sec. VII
D3-1-VB1	Variable Feeder	150 tph	2000	Kinergy	N/A	N/A	Att. C, Sec. VII
D3-1-DC1	Dust Collector	N/A	1974	Mikropul	2G3-96	72-H-2337	Att. C, Sec. VII
D3-1-DC2	Product Collector	N/A	1987	Mikropul	720J-10-20-TR	860520H1-H2	Att. C, Sec. VII
D3-1-DC3	Dust Collector	N/A	1987	Mikropul	289S-10-20-TR	860520H3	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
Various enclosed screw conveyor devices							
Various air slide devices.							
Various pneumatic conveying devices.							
XIX: Product Storage and Bulk Loadout							
BL-BE1	Bucket Elevator	450 tph	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-BE2	Bucket Elevator	450 tph	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-BE3	Bucket Elevator	450 tph	1998	Rexnord	1636	1636-2613G	Att. C, Sec. VII
BL-RS1	Rotary Screen	276 tph	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-RS2	Rotary Screen	276 tph	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-RS3	Rotary Screen	276 tph	1997	N/A	N/A	N/A	Att. C, Sec. VII
BL-SB1	Storage Bin	150 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-SB2	Storage Bin	150 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-SB3	Storage Bin	150 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-SB4	Storage Bin	150 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-SB5	Storage Bin	850 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-SB6	Storage Bin	100 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
CM-A1	Alleviator	276 tph	1970	N/A	N/A	N/A	Att. C, Sec. VII
CM-A2	Alleviator	276 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM-A3	Alleviator	276 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
CM-A4	Alleviator	276 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
CM-A5	Alleviator	276 tph	1971	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB1	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB2	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB3	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB4	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB5	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB6	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB7	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB8	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB9	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB10	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB11	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB12	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB13	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB14	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB15	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CS-SB16	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB17	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB18	Storage Silo	3,100 tons	1955	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB19	Storage Silo	3,100 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB20	Storage Silo	3,100 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB21	Storage Silo	3,100 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB22	Storage Silo	3,100 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
CS-SB23	Storage Silo	3,100 tons	1960	N/A	N/A	N/A	Att. C, Sec. VII
BL-DC1	Dust Collector	N/A	1984	Mikropul	49S-8-20	845034H1	Att. C, Sec. VII
BL-DC2	Dust Collector	N/A	1984	Mikropul	49S-8-20	845038H1	Att. C, Sec. VII
BL-DC3	Dust Collector	N/A	1984	Mikropul	100S-8-20	845060H1	Att. C, Sec. VII
BL-DC4	Dust Collector	N/A	1984	Mikropul	100S-8-20	845060H2	Att. C, Sec. VII
BL-DC5	Dust Collector	N/A	2001	Mikropul	49-S-10-20-TR	201087-H1	Att. C, Sec. VII
BL-DC6	Dust Collector	N/A	1986	Mikropul	100S-8-20	860058	Att. C, Sec. VII
BL-DC7	Dust Collector	N/A	1984	Mikropul	49S-10-20B	79545H1	Att. C, Sec. VII
BL-SB5-DC1	Dust Collector	N/A	1974	Mikropul	36S-8-30	N/A	Att. C, Sec. VII
BL-SB5-DC2	Dust Collector	N/A	1980	Mikropul	25S-8-30	79261H	Att. C, Sec. VII
BL-SB5-DC3	Dust Collector	N/A	1980	Mikropul	25S-8-30	79318H1	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
CM-DC8	Dust Collector	N/A	1980	Mikropul	144S-6-20	76583H1	Att. C, Sec. VII
CM-DC9	Dust Collector	N/A	1973	Mikropul	130S-8-20	71-H-1179	Att. C, Sec. VII
CM-DC10	Dust Collector	N/A	1973	Mikropul	130S-8-20	71-H-1178	Att. C, Sec. VII
CM-DC11	Dust Collector	N/A	1973	Mikropul	130S-8-20	71-H-1180	Att. C, Sec. VII
CM-DC12	Dust Collector	N/A	1973	Mikropul	130S-8-20	71-H-1981	Att. C, Sec. VII
CM-DC14	Dust Collector	N/A	1987	Fuller	196C10	N/A	Att. C, Sec. VII
CM-DC15	Dust Collector	N/A	1987	Fuller	196C10	N/A	Att. C, Sec. VII
CM-DC16	Dust Collector	N/A	1987	Fuller	196C10	N/A	Att. C, Sec. VII
CM-DC17	Dust Collector	N/A	2001	Fuller	N/A	N/A	Att. C, Sec. VII
Various enclosed screw conveyor devices							
Various air slide devices							
XX: Cement Packhouse							
PH-BC2	Belt Conveyor	276 tph	1950	N/A	N/A	N/A	Att. C, Sec. VII
PH-BE1	Bucket Elevator	276 tph	1948	N/A	N/A	N/A	Att. C, Sec. VII
PH-BE2	Bucket Elevator	276 tph	1952	N/A	N/A	N/A	Att. C, Sec. VII
PH-FP1	Pneumatic Conveyor	276 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
PH-PK3	Cement Packer	276 tph	2003	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PK4	Cement Packer	276 tph	1950	St. Regis	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
PH-PZ2	Palletizer	N/A	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ3	Palletizer	N/A	1999	St. Regis	N/A	N/A	Att. C, Sec. VII
PH-RS1	Rotary Screen	276 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
PH-RS2	Rotary Screen	276 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
PH-SB1	Storage Bin	N/A	N/A	N/A	N/A	N/A	Att. C, Sec. VII
PH-SB2	Storage Bin	N/A	N/A	N/A	N/A	N/A	Att. C, Sec. VII
PH-PK3-BC1	Belt Conveyor	276 tph	N/A	N/A	N/A	N/A	Att. C, Sec. VII
PH-PK3-BC2	Belt Conveyor	276 tph	1950	N/A	N/A	N/A	Att. C, Sec. VII
PH-PK3-BC4	Belt Conveyor	276 tph	1950	N/A	N/A	N/A	Att. C, Sec. VII
PH-PK3-BC5	Belt Conveyor	276 tph	1950	N/A	N/A	N/A	Att. C, Sec. VII
PH-PK3-SE1A	Stack Elevator	276 tph	1950	St. Regis	N/A	N/A	Att. C, Sec. VII
PH-PK3-SE1B	Stack Elevator	276 tph	1950	St. Regis	N/A	N/A	Att. C, Sec. VII
PH-PK4-BC1	Belt Conveyor	276 tph	1950	N/A	N/A	N/A	Att. C, Sec. VII
PH-PZ2-BC1	Belt Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-BC2	Belt Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-BC3	Belt Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-BC4	Belt Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-BC5	Belt Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
PH-PZ2-GRC	Roller Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-PRC1	Roller Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-PRC2	Roller Conveyor	276 tph	1999	Mollers	N/A	N/A	Att. C, Sec. VII
PH-PZ2-SE1A	Sack Elevator	276 tph	N/A	St. Regis	N/A	N/A	Att. C, Sec. VII
PH-PZ2-SE1B	Sack Elevator	276 tph	N/A	St. Regis	N/A	N/A	Att. C, Sec. VII
PH-DC1	Dust Collector	N/A	1979	Mikropul	144S-10-20	79296H1	Att. C, Sec. VII
PH-DC2	Dust Collector	N/A	1979	Mikropul	144S-10-20	79296H2	Att. C, Sec. VII
PH-DC3	Dust Collector	N/A	1985	Mikropul	100S-8-20	855258H1	Att. C, Sec. VII
PH-DC4	Dust Collector	N/A	1985	Mikropul	100S-8-20	855259	Att. C, Sec. VII
PH-DC5	Dust Collector	N/A	1975	Mikropul	100S-8-20	N/A	Att. C, Sec. VII
Various enclosed screw conveyor devices							
Various air slide devices							
Various pneumatic conveying devices							
XXI: Solid Fuel (Coal/Coke) System							
H3-K1-BS1	Weigh Belt Feeder	10 tph	Pre Oct. 1974	Thayer	N/A	N/A	Att. C, Sec. III.B
H3-K1-CM	Coal Mill	10 tph	Pre Oct. 1974	C. E. Raymond	493	N/A	Att. C, Sec. III.B
H3-K1-CM-CC	Cyclone	10 tph	Pre Oct. 1974	C.E. Raymond	N/A	N/A	Att. C, Sec. III.B

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
H3-K1-CM-SB	Storage Bin	54 tons	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
H3-K2-BS1	Weigh Belt Feeder	10 tph	Pre Oct. 1974	Thayer	N/A	N/A	Att. C, Sec. III.B
H3-K2-CM	Coal Mill	10 tph	Pre Oct. 1974	C. E. Raymond	493	N/A	Att. C, Sec. III.B
H3-K2-CM-CC	Cyclone	10 tph	Pre Oct. 1974	C.E. Raymond	N/A	N/A	Att. C, Sec. III.B
H3-K2-CM-SB	Storage Bin	54 tons	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
H3-K3-BS1	Weigh Belt Feeder	10 tph	Pre Oct. 1974	Thayer	N/A	N/A	Att. C, Sec. III.B
H3-K3-CM	Coal Mill	10 tph	Pre Oct. 1974	C. E. Raymond	493	N/A	Att. C, Sec. III.B
H3-K3-CM-CC	Cyclone	10 tph	Pre Oct. 1974	C.E. Raymond	N/A	N/A	Att. C, Sec. III.B
H3-K3-CM-SB	Storage Bin	54 tons	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
H3-K4-BS1	Weigh Belt Feeder	25 tph	2008	Merrick	450	450-MC3-29671	Att. C, Sec. III.C
H3-K4-CM	Coal Mill	25 tph	Pre Oct. 1974	C. E. Raymond	713	N/A	Att. C, Sec. III.B
H3-K4-CM-CC	Cyclone	25 tph	Pre Oct. 1974	C.E. Raymond	N/A	N/A	Att. C, Sec. III.B
H3-K4-CM-SB	Storage Bin	135 tons	2026	N/A	N/A	N/A	Att. C, Sec. III.C
H3-K4-CM-SS	Separator	25 tph	2002	Alstom Preheater	N/A	N/A	Att. C, Sec. III.B
R6-BA1	Vibrating Feeder	50 tph	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
R6-BA2	Vibrating Feeder	50 tph	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
R6-BA3	Vibrating Feeder	50 tph	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
R6-BC1	Belt Conveyor	150 tph	Pre Oct. 1974	Thomas Conveyors	N/A	N/A	Att. C, Sec. III.B
R6-BC2	Belt Conveyor	100 tph	Pre Oct. 1974	Thomas Conveyors	N/A	N/A	Att. C, Sec. III.B
R6-BC3	Belt Conveyor	100 tph	Pre Oct. 1974	Thomas Conveyors	N/A	N/A	Att. C, Sec. III.B
R6-BS1	Belt Scale	50 tph	1993	Thayer	N/A	N/A	Att. B, Sec. IV
R6-HOP	Hopper	50 tons	1994	N/A	N/A	N/A	Att. B, Sec. IV
R6-IC1	Impact Crusher	50 tph	2009	Pennsylvania Crusher	TKK 26x30	N/A	Att. C, Sec. III.C
R6-SB	Silo	2,500 tons	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
R6-SCF1	Screw Feeder	50 tph	1994	N/A	N/A	N/A	Att. B, Sec. IV
R6-VF3	Vibrating Feed Hopper	50 tph	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
R6-VF4	Vibrating Feed Hopper	50 tph	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
R6-VF5	Vibrating Feed Hopper	50 tph	Pre Oct. 1974	N/A	N/A	N/A	Att. C, Sec. III.B
R6-VF1	Vibrating Feeder	500 tph	2003	Kinergy	KDF-30-	KDF-7228	Att. C, Sec. III.C
R6-VF2	Vibrating Feeder	500 tph	2003	Kinergy	HD	KDF-7229	Att. C, Sec. III.C
RB-VF1	Vibrating Feeder	500 tph	TBD	JVI	UPF 1220	3681	Att. C, Sec. III.C

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
RB-VF2	Vibrating Feeder	500 tph	TBD	JVI	UPF 1220	3680	Att. C, Sec. III.C
R6-BC1A	Belt Conveyor	800 tph	TBD	Balzer Pacific	N/A	78566	Att. C, Sec. III.C
R6-BC5	Belt Conveyor	800 t ph	TBD	Balzer Pacific	N/A	78565	Att. C, Sec. III.C
R6-TS1	Radial Stacker Belt	800 tph	TBD	Masaba	Magnum	2022228	Att. C, Sec. III.C
R6-BC4	Belt Conveyor	100 tph	2022	Goodfellow	Custom	C10329	Att. C, Sec. III.C
Various enclosed screw conveyor devices							
XXII: Twin Peaks Rock and Stone Aggregate Plant							
AGG-LS1	Lime Silo	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. X
AGG-LS1-DC	Lime Bin Vent	TBD	TBD	TBD	TBD	TBD	Att. C, Sec. X
B11-BC1	Belt Conveyor	1,200 tph	2020	Goodfellow	Custom	C10123	Att. B, Sec. III.E
B11-BC2	Belt Conveyor	1,200 tph	2020	Goodfellow	Custom	C10215	Att. B, Sec. III.E
B11-TS-BC1	Belt Conveyor	1,200 tph	2020	Masaba	Magnum	2020362	Att. B, Sec. III.E
B11-TS-BC2	Belt Conveyor	1,200 tph	2020	Masaba	Magnum	2020362	Att. B, Sec. III.C (for emissions when transferring to a stockpile) Att. B, Sec. III.E (for the

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
							actual belt conveyor)
C-1	Belt Conveyor	800 tph	1985	Spaulding	42"x25'	TR143-85-1338	Att. B, Sec. III.D
C-2	Belt Conveyor	800 tph	1985	Spaulding	30"x60'	80x42T-85-1339	Att. B, Sec. III.D
C-3	Belt Conveyor	400 tph	1985	Spaulding	36"x20'	N/A	Att. B, Sec. III.D
C-4	Portable Conveyor	N/A	N/A	N/A	60"x25'	TBD	Att. B, Sec. III.D
C-5	Belt Conveyor	400 tph	2022	TBD	42"x150'	TBD	Att. B, Sec. III.E
C-6	Cone Crusher Under Conveyor	400 tph	2022	Sandvick	36"x35'	N/A	Att. B, Sec. III.E
C-7	Belt Conveyor	400 tph	1985	Spaulding	36x18	TR145-85-1350	Att. B, Sec. III.D
C-8	Belt Conveyor	400 tph	1985	Spaulding	36"x20'	TR144-85-1340	Att. B, Sec. III.D
C-9	Belt Conveyor	400 tph	2022	Goodfellow	36"x20'	N/A	Att. B, Sec. III.E
C-10	Radial Stacker	400 tph	1985	TBD	36"x60'	TBD	Att. B, Sec. III.E
C-11	Belt Conveyor	400 tph	2022	Goodfellow	36"x100'	TBD	Att. B, Sec. III.E
C-12	Belt Conveyor	400 tph	1985	N/A	36'x60'	N/A	Att. B, Sec. III.D
C-13	Radial Stacker	400 tph	1985	Spaulding	30"x100'RS	100-30T-85-1347	Att. B, Sec. III.C
C-14	Belt Conveyor	400 tph	N/A	N/A	36"x60'	N/A	Att. B, Sec. III.D

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C-15	Belt Conveyor	400 tph	N/A	N/A	36"x60'	N/A	Att. B, Sec. III.D
C-16	Belt Conveyor	300 tph	1985	N/A	36"x40'	N/A	Att. B, Sec. III.D
C-17	Belt Conveyor	400 tph	2022	Goodfellow	30"x30'	TR145-851350	Att. B, Sec. III.D
C-18	Belt Conveyor	300 tph	2022	Goodfellow	30"x60'	N/A	Att. B, Sec. III.D
C-19	Stacker	200 tph	1985	Spaulding	24"x100'	N/A	Att. B, Sec. III.C
C-20	Belt Conveyor	250 tph	1985	N/A	36" x 80'	TBD	Att. B, Sec. III.E
C-21	Under Screen Belt Triple Deck S-3	400 tph	TBD	Diester	36"x20'	N/A	Att. B, Sec. III.E
C-22	Under Screen Belt Triple Deck S-4	400 tph	1985	Diester	36"x20'	N/A	Att. B, Sec. III.E
C-23	Belt Conveyor	400 tph	1985	N/A	36"x40'	N/A	Att. B, Sec. III.D
C-24	Radial Stacker Conveyor	400 tph	1985	N/A	30"x60'	N/A	Att. B, Sec. III.C
C-25	Belt Conveyor	400 tph	1985	N/A	30"x100'	N/A	Att. B, Sec. III.D
C-26	Belt Conveyor	400 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.D
C-27	Belt Conveyor	400 tph	2022	Goodfellow	30"x20'	TR145-85-1343	Att. B, Sec. III.D
C-28	Belt Conveyor	400 tph	2022	Goodfellow	36"x60'	N/A	Att. B, Sec. III.E

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C-29	Under Screen Belt Triple Deck S-4	400 tph	1985	Diester	36"x20'	N/A	Att. B, Sec. III.D
Splitter 1	Splitter	N/A	N/A	N/A	N/A	N/A	N/A
Splitter 2	Splitter	N/A	N/A	N/A	N/A	N/A	N/A
Splitter 3	Splitter	TBD	TBD	TBD	TBD	TBD	N/A
C-68	Belt Conveyor	400 tph	TBD	TBD	36" x 100'	TBD	Att. B, Sec. III.E
BM-2	Blade Mill	500 tph	TBD	Twin	54"x20'	TBD	Att. B, Sec. I.D
FM-5	Fine Material Washer	200 tph	TBD	Twin	36"	TBD	Att. B, Sec. I.D
DWS-4	Dewatering Screen	200 tph	TBD	TBD	TBD	TBD	Att. B, Sec. I.D
S-1	8x20 Wash Screen	500 tph	TBD	TBD	TBD	TBD	Att. B, Sec. I.D
S-2	Screen	800 tph	1985	Diester	6x20 2 D	398592	Att. B, Sec. III.D
S-3	Screen	400 tph	1985	Diester	6x20 3 D	398593	Att. B, Sec. III.D
S-4	Screen	400 tph	1985	Diester	6x20 3 D	398594	Att. B, Sec. III.D
CR-1	Portable Crusher	400 tph	2022	Sandvick	CH550	N/A	Att. B, Sec. III.E
Hopper 1	Hopper	800 tph	1985	N/A	N/A	N/A	Att. B, Sec. III.D
Hopper 2	Hopper	100 tph	1985	N/A	N/A	N/A	Att. B, Sec. III.D

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
N/A	Belt Conveyor	200 tph	1985	Spaulding	24x37	33x24T-85-1359	Att. B, Sec. III.D
N/A	Stacker	200 tph	1985	Spaulding	24x100 FS	100x24T-851358	Att. B, Sec. III.C
N/A	Portable Feeder Conveyor	200 tph	1985	Helmick	30x68	4635-1330-6083B	Att. B, Sec. III.D
N/A	Portable Screens (Max Qty: 2)	2,006 tph (combined)	N/A	N/A	N/A	N/A	Att. B, Sec. III.D
N/A	Portable Conveyors (Max Qty: 14)	4,483 tph (combined)	N/A	N/A	N/A	N/A	Att. B, Sec. III.D
B11-DC1	Dust Collector	N/A	Pre August 1971	Mikropul	100S-8-20	71-H-1396	Att. B, Sec. III.E
TP-DC1	Dust Collector	8,395 cfm	2022	Donaldson Torit	60/15	TBD	Att. B, Sec III.E
XXIII: Cotton Field Primary and Overland Plant							
F-2	Vibrating Grizzly Feeder	800 tph	1985	Diester	5x22	64-177	Att. B, Sec. III.C
CR-2	Portable Crusher	400 tph	1985	Kue Ken	34x42 Jaw	120S12857 R	Att. B, Sec. III.D
C-30	Belt Conveyor	800 tph	N/A	N/A	48"x40'	N/A	Att. B, Sec. III.E
C-31	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-32	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-33	Belt Conveyor	800 tph	N/A	N/A	36"x60'	N/A	Att. B, Sec. III.E
C-34	Belt Conveyor	800 tph	N/A	N/A	48"x40'	N/A	Att. B, Sec. III.E

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C-35	Belt Conveyor	800 tph	N/A	N/A	60"x25'	N/A	Att. B, Sec. III.E
C-36	Belt Conveyor	800 tph	N/A	N/A	36"x100'	TBD	Att. B, Sec. III.E
C-37	Belt Conveyor	800 tph	N/A	N/A	36"x100'	TBD	Att. B, Sec. III.E
C-38	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-39	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-40	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-41	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-42	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-43	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-44	Belt Conveyor	800 tph	N/A	N/A	36"x100'	N/A	Att. B, Sec. III.E
C-74	Belt Conveyor	800 tph	N/A	N/A	36"x150'	N/A	Att. B, Sec. III.E
S-5	Portable Screen	N/A	N/A	N/A	N/A	N/A	Att. B, Sec. III.E
XXIV: Manufactured Fines Plant							
C-45	Radial Super Stacker	TBD	TBD	TBD	36"x150'	TBD	Att. B, Sec. III.C
C-46	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.E

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C-47	Belt Conveyor	TBD	TBD	TBD	36"x60'	TBD	Att. B, Sec. III.E
C-69	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.E
C-70	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.E
C-71	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.E
C-72	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.E
C-73	Belt Conveyor	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.E
CR-4	Portable Crusher	N/A	N/A	N/A	N/A	N/A	Att. B, Sec. III.E
Hopper 4	Hopper	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. III.C
S-6	Portable Screen	N/A	N/A	N/A	N/A	N/A	Att. B, Sec. III.E
TBD	CR-4 Baghouse	8,395 cfm	TBD	Donaldson Torit	TBD	TBD	TBD
XXV: Wash Plant							
C-47	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-48	Belt Conveyor	750 tph	TBD	TBD	36"x150'	TBD	Att. B, Sec. III.E
C-49	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-50	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-51	Belt Conveyor	750 tph	TBD	TBD	48"x60'	TBD	Att. B, Sec. III.E

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C-52	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-53	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-54	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-55	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-56	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-57	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-58	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-59	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-60	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-61	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-62	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-63	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-64	Belt Conveyor	750 tph	TBD	TBD	36"x80'	TBD	Att. B, Sec. III.E
C-65	Belt Conveyor	750 tph	TBD	TBD	36"x100'	TBD	Att. B, Sec. III.E
C-66	Belt Conveyor	750 tph	TBD	TBD	36"x60'	TBD	Att. B, Sec. III.E

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
C-67	Belt Conveyor	750 tph	TBD	TBD	36"x60'	TBD	Att. B, Sec. III.E
Hopper 5	Hopper	500 tph	TBD	TBD	TBD	TBD	Att. B, Sec. III.C
S-7	Screen	500 tph	TBD	TBD	8x20	TBD	Att. B, Sec. III.E
S-8	Screen	350 tph	TBD	TBD	8x20	TBD	Att. B, Sec. III.E
BM-1	Blade Mill	500 tph	TBD	McLanahan	Twin 54"x20	TBD	Att. B, Sec. I.D
CMW-1	Coarse Material Washer	350 tph	TBD	TBD	Twin 44"x20"	TBD	Att. B, Sec. I.D
FM-1	Fine Material Washer	200 tph	TBD	Superior Industries	Single 36"x25'	TBD	Att. B, Sec. I.D
FM-2	Fine Material Washer	200 tph	TBD	Superior Industries	Aggredry	TBD	Att. B, Sec. I.D
FM-3	Fine Material Washer	400 tph	TBD	Superior Industries	Aggredry	TBD	Att. B, Sec. I.D
FM-5	Fine Material Washer	200 tph	TBD	Superior Industries	Aggredry	TBD	Att. B, Sec. I.D
DWS-1	Dewatering Screen	200 tph	TBD	Superior Industries	Aggredry	TBD	Att. B, Sec. I.D
DWS-2	Dewatering Screen	200 tph	TBD	Superior Industries	Aggredry	TBD	Att. B, Sec. I.D
DWS-3	Dewatering Screen	200 tph	TBD	Superior Industries	Aggredry	TBD	Att. B, Sec. I.D
Classifying Tank	Classifying Tank	TBD	TBD	Superior Industries	AR136 12x48	TBD	N/A
HRT-60	High Rate Thickener	HRT-60	TBD	McLanahan	TBD	TBD	N/A

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
XXVI: Portable Grizzly Screen							
R1-SGR	Portable Grizzly	50 tph	2009	N/A	N/A	N/A	Att. B, Sec. III.D Att. B, Sec. IV
XXVII: Fuel Burning Equipment							
AGG-Gen	Non-Emergency Diesel Engine	878 hp	2023	Volvo	TWD1673 GE	N/A	Att. B, Sec. V.D/E
T1-MG1	Diesel Emergency Generator	250 hp engine	1989	Kohler/John Deere	150ROJZ/ 6076A	256422/RG 6067A123344	Att. B, Sec. V.B/C
H3-K-MG	NG Motor Emergency Generator	134 hp	2000	Caterpillar	N/A	N/A	Att. B, Sec. V.B/C
H3-K4-AUX	NG Auxiliary Emergency Engine	70 hp	1971	Caterpillar	N/A	N/A	Att. B, Sec. V.B/C
H4-MG1	NG Emergency Emergency Generator	675 hp engine output	2018 (Model Year 1994)	Caterpillar	3415SITA	N/A	Att. B, Sec. V.B
Bunker C Boiler	NG Boiler	6.275 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B, C, and D
Central Control Heating Boiler	NG Boiler	0.825 MMBtu/hr	1971	Thermo-Pak	6WA-825	N/A	Att. B, Sec. VI.B and C
D4-RM1-HTR	NG Heater	75 MMBtu/hr	2000	N/A	N/A	N/A	Att. B, Sec. VI.B, C, and D
Separator Heaters (4)	Natural Gas	2 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Direct-Fired Heaters (2)	Natural Gas	2 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
Elevator Heaters (4)	Natural Gas	0.5 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Water Heater	NG Boiler	0.075 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Water Heater	NG Boiler	0.046 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Water Heater	NG Boiler	0.04 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Unit Heater	Natural Gas	0.3 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Unit Heater (3)	Natural Gas	0.25 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Carpenter Shop Unit Heater	Natural Gas	0.1 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Unit Heater (2)	Natural Gas	0.075 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Radiant Heaters (7)	Natural Gas	0.03 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Office Furnace	Natural Gas	0.18 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Office Furnaces (2)	Natural Gas	0.08 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Office Furnace	Natural Gas	0.05 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Furnaces (3)	Natural Gas	0.04 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
Furnaces (3)	Natural Gas	0.025 MMBtu/hr	N/A	N/A	N/A	N/A	Att. B, Sec. VI.B and C
XXVIII: Petroleum Storage Tanks/Vessels							

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
Diesel	Aboveground	50,000 gallons	pre-1980	N/A	N/A	N/A	Att. B, Sec. VIII
Diesel	Aboveground	12,000 gallons	N/A	N/A	N/A	N/A	Att. B, Sec. VIII
On- Specification Used Oil	Aboveground	31,000 gallons	N/A	N/A	N/A	N/A	Att. B, Sec. VIII
On-Specification Used Oil (2)	Aboveground	28,700 gallons	N/A	N/A	N/A	N/A	Att. B, Sec. VIII
Gasoline	Aboveground	2,000 gallons	1986	N/A	N/A	N/A	Att. B, Sec. VII
Lube Tank (6)	Aboveground	1,000 gallons	N/A	N/A	N/A	N/A	Att. B, Sec. VIII
Used Oil (2)	Aboveground	2,000 gallons	N/A	N/A	N/A	N/A	Att. B, Sec. VIII
Bunker C	Aboveground	50,000 bbl	1974	N/A	N/A	N/A	Att. B, Sec. VIII
XXIX: New Concrete Batch Plant							
BP	ERIE STRAYER TILT MIXER	250 YPH	TBD	ERIE STRAYER	MP-11C	TBD	Att. B, Sec. X
H-1	Hopper	TBD	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
H-2	Hopper	TBD	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
H-3	Hopper	TBD	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
H-4	Hopper	TBD	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-C-1	Ground Feed Belt	500 tph	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-C-2	Ground Feed Belt	500 tph	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-C-3	Ground Feed Belt	500 tph	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
BP-C-4	Ground Feed Belt	500 tph	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-S-1	Overhead Silo	70 ton	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-S-2	Overhead Silo	70 ton	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-S-3	Overhead Silo	70 ton	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-S-4	Super Silo	TBD	TBD	ERIE STRAYER	TBD	TBD	Att. B, Sec. X
BP-S-5	Guppy	150 ton	TBD	TBD	TBD	TBD	Att. B, Sec. X
TBD	Overhead Aggregate Bin (4 Compartment)	80 yards	TBD	TBD	TBD	TBD	Att. B, Sec. X
TBD	Aggregate Weigh Hopper (4 bins)	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. X
TBD	Aggregate Charge Belt	TBD	TBD	TBD	48" X100'	TBD	Att. B, Sec. X
TBD	Cement Weigh Batcher	TBD	TBD	TBD	TBD	TBD	Att. B, Sec. X
BP-DC-1	Dust Collector	10,000 cfm	TBD	C&W	RA- 200	TBD	Att. B, Sec. X
BP-BH-1	Silo Baghouse	2,340 cfm	TBD	C&W	LPR-8-S	TBD	Att. B, Sec. X
BP-BH-2	Silo Baghouse	2,340 cfm	TBD	C&W	LPR-8-S	TBD	Att. B, Sec. X
BP-BH-3	Silo Baghouse	2,340 cfm	TBD	C&W	LPR-8-S	TBD	Att. B, Sec. X
BP-BH-4	Silo Baghouse	2,340 cfm	TBD	C&W	LPR-8-S	TBD	Att. B, Sec. X
BP-C-5	Conveyor	800 tph	TBD	TBD	48"X20'	TBD	Att. B, Sec. X

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PROCESS AREA/ EQUIPMENT ID	TYPE/ DESCRIPTION	NOMINAL CAPACITY	YEAR INSTALLED	MANUFACTURER	MODEL	SERIAL NUMBER	APPLICABLE SECTION
BP-WC-1	Water Chiller	80 ton	TBD	TBD	TBD	TBD	Trivial Activity per R18-2-101.147(b)(xv)
Unknown	Air Compressor	25 hp	TBD	INGERSOL RAND	TBD	TBD	Trivial Activity per R18-2-101.147(b)(v)
TBD	WATER TANK	20,000 gallons	TBD	HALTEC	TBD	TBD	Insignificant Activity per R18-2-101.69.c(iv)
TBD	WATER TANK	20,000 gallons	TBD	HALTEC	TBD	TBD	Insignificant Activity per R18-2-101.69.c(iv)

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