



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS II PERMIT

PERMITTEE: Concord Blue Eagar LLC
FACILITY: Concord Blue Eagar LLC
PERMIT #: 63224
DATE ISSUED:
EXPIRY DATE:

SUMMARY

This Class II synthetic minor operating permit No. 63224 is issued to Concord Blue Eagar, LLC, the Permittee, for the construction and operation of a biomass powered electrical power generating station and biochar production facility. The facility will be located in Eagar, Apache County, Arizona.

The electrical generating equipment consists of two lean burn reciprocating engines fired by a synthesized gaseous fuel ("syngas") produced by the thermolysis of biomass. The biomass to be used to produce the syngas includes wood waste from sawmill operations, forest thinning operations and community slash piles. The staged thermolysis system uses heat released by ceramic balls that flow via gravity from the top of the system to the bottom imparting the highest temperatures to the pyrolysis gas in a reformer vessel and then lower temperatures to the feedstock fed into the pyrolysis vessel. A portion of the reformed and cleaned syngas is used in a multi-fuel process burner to reheat the ceramic beads to the proper operating temperature, making the facility self-sustaining.

The uncontrolled emissions from this facility are greater than the significance levels identified in A.A.C. R18-2-101.130. Therefore, a class II permit is required for this facility in accordance with A.A.C. R18-2-302.B.2.a. The facility's potential to emit (PTE) is greater than the permitting exemption threshold for NO_x and CO, and consequently, triggers the requirements of A.A.C. R18-334 for Minor New Source Review (NSR) for these pollutants. The facility has met the requirements of Minor NSR by demonstrating compliance with the National Ambient Air Quality Standards (NAAQS) for the referenced pollutants through a refined air dispersion modeling analysis.

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

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ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 63224 For Concord Blue Eagar, LLC

I. PERMIT EXPIRATION AND RENEWAL

[ARS § 49-426.F, A.A.C. R18-2-304.C.2, and -306.A.1]

- A. This permit is valid for a period of five years from the date of issuance.
- B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

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

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona 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 noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

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

[A.A.C. R18-2-306.A.8.c, -321.A.1, and -321.A.2]

- A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The permit shall be reopened and revised under any of the following circumstances
 1. 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.
 2. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
- C. Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings shall not result in a resetting of the five-year permit term.

IV. POSTING OF PERMIT

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

- A.** The Permittee shall post this permit or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:
 - 1. Current permit number; or
 - 2. Serial number or other equipment ID number 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.

V. FEE PAYMENT

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

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

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

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

- A.** The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31st or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B.** The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

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

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

The compliance certifications shall include the following:

- 1. Identification of each term or condition of the permit that is the basis of the certification;
- 2. The identification of the methods or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;
- 3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify

each deviation and take it into account for consideration in the compliance certification;

4. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
5. Other facts the Director may require determining the compliance status of the source.

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

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

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

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

IX. INSPECTION AND ENTRY

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

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

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

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

[A.A.C. R18-2-304.C.3]

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM

[40 CFR Part 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply

with these provisions according to the time line specified in 40 CFR Part 68.

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

[A.A.C. R18-2-310.01.A, -310.01.B, and -310.01.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 XII.A.1.b below.
 - (2) Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.(1) above.
 - b. The report shall contain the following information:
 - (1) Identity of each stack or other emission point where the excess emissions occurred;
 - (2) Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
 - (3) Date, time and duration, or expected duration, of the excess emissions;
 - (4) Identity of the equipment from which the excess emissions emanated;
 - (5) Nature and cause of such emissions;
 - (6) If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
 - (7) Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the

emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above.

B. Permit Deviations Reporting

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

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

C. Emergency Provision

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

1. An “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426.I.5]

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

E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown
[A.A.C. R18-2-310]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

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

2. Affirmative Defense for Malfunctions

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

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

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

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
 - (1) The excess emissions could not have been prevented through careful and prudent planning and design;
 - (2) If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
 - (3) The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - (4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

- (5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - (6) During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;
 - (7) All emissions monitoring systems were kept in operation if at all practicable; and
 - (8) Contemporaneous records documented the Permittee's actions in response to the excess emissions.
- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XII.E.2 above.
4. Affirmative Defense for Malfunctions During Scheduled Maintenance
- If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition XII.E.2 above.
5. Demonstration of Reasonable and Practicable Measures
- For an affirmative defense under Condition XII.E.2 or XII.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Condition XII.E and A.A.C. R18-2-310.01, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

XIII. RECORD KEEPING REQUIREMENTS

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

- A.** The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The name of the company or entity that performed the analyses;
 4. A description of the analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- B.** The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and

all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

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

XIV. REPORTING REQUIREMENTS

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

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment "A".
- B. Excess emission; permit deviation, and emergency reports in accordance with Section XII of Attachment "A".
- C. Other reports required by any condition of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION

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

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

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-317.01, -318, -319, and -320]

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

- A. Facility Changes that Require a Permit Revision - Class II (A.A.C. R18-2-317.01);
- B. Administrative Permit Amendment (A.A.C. R18-2-318);
- C. Minor Permit Revision (A.A.C. R18-2-319); and
- D. Significant Permit Revision (A.A.C. R18-2-320).

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

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION

[A.A.C. R18-2-306.A.4 and -317.02]

- A.** Except for a physical change or change in the method of operation at a Class II source requiring a permit revision under A.A.C. R18-2-317.01, or a change subject to logging or notice requirements in Conditions XVII.B and XVII.C below, a change at a Class II source shall not be subject to revision, notice, or logging requirements under this Section.
- B.** Except as otherwise provided in the conditions applicable to an emissions cap created under A.A.C. R18-2-306.02, the following changes may be made if the source keeps on site records of the changes according to Appendix 3 of the Arizona Administrative Code:
1. Implementing an alternative operating scenario, including raw materials changes;
 2. Changing process equipment, operating procedures, or making any other physical change if the permit requires the change to be logged;
 3. Engaging in any new insignificant activity listed in A.A.C. R18-2-101.57.a through A.A.C. R18-2-101.57.i but not listed in the permit;
 4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Director may require verification of efficiency of the new equipment by performance tests; and
 5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.
- C.** Except as provided in the conditions applicable to an emissions cap created under A.A.C. R18-2-306.02, the following changes may be made if the source provides written notice to the Department in advance of the change as provided below:
1. Replacing an item of air pollution control equipment listed in the permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: 7 days. The Director may require verification of efficiency of the new equipment by performance tests;
 2. A physical change or change in the method of operation that increases actual emissions more than 10% of the major source threshold for any conventional pollutant but does not require a permit revision: 7 days;
 3. Replacing an item of air pollution control equipment listed in the permit with one that is not substantially similar but that has the same or better efficiency: 30 days. The Director may require verification of efficiency of the new equipment by performance tests;
 4. A change that would trigger an applicable requirement that already exists in the permit: 30 days unless otherwise required by the applicable requirement;
 5. A change that amounts to reconstruction of the source or an affected facility: 7 days. For the purposes of this subsection, reconstruction of a source or an affected facility shall be presumed if the fixed capital cost of the new components exceeds 50% of the fixed capital cost of a comparable entirely new source or affected

facility and the changes to the components have occurred over the 12 consecutive months beginning with commencement of construction; and

6. A change that will result in the emissions of a new regulated air pollutant above an applicable regulatory threshold but that does not trigger a new applicable requirement for that source category: 30 days. For purposes of this requirement, an applicable regulatory threshold for a conventional air pollutant shall be 10% of the applicable major source threshold for that pollutant.

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

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

E. A source may implement any change in Condition XVII.C above without the required notice by applying for a minor permit revision under A.A.C. R18-2-319 and complying with subsection A.A.C. R18-2-319.D.2 and A.A.C. R18-2-319.G.

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

G. Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, constitutes a change under subsection A.A.C. R18-2-317.01.A.

H. If a source change is described under both Conditions XVII.B and XVII.C above, the source shall comply with Condition XVII.C above. If a source change is described under both Condition XVII.C above and A.A.C. R18-2-317.01.B, the source shall comply with A.A.C. R18-2-317.01.B.

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

J. Logging Requirements

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

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

- a. A description of the change, including:
 - i. A description of any process change;
 - ii. A description of any equipment change, including both old and new equipment descriptions, model numbers, and serial numbers, or any other unique equipment ID number; and
 - iii. A description of any process material change.
 - b. The date and time that the change occurred.
 - c. The provision of A.A.C. R18-2-317.02.B that authorizes the change to be made with logging.
 - d. The date the entry was made and the first and last name of the person making the entry.
2. Logs shall be kept for 5 years from the date created. Logging shall be performed in indelible ink in a bound log book with sequentially number pages, or in any other form, including electronic format, approved by the Director.

XVIII. TESTING REQUIREMENTS

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

A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

B. Operational Conditions During Testing

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

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

D. Test Plan

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

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

E. Stack Sampling Facilities

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

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

F. Interpretation of Final Results

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

G. Report of Final Test Results

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

XIX. PROPERTY RIGHTS

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

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

XX. SEVERABILITY CLAUSE

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

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

XXI. PERMIT SHIELD

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

Compliance with the conditions of this permit shall be deemed compliance with all applicable

requirements identified in the portions of this permit subtitled “Permit Shield”. The permit shield shall not apply to minor revisions pursuant to Condition XVI.B of this Attachment and any facility changes without a permit revision pursuant to Section XVII of this Attachment.

XXII. PROTECTION OF STRATOSPHERIC OZONE

[40 CFR Part 82]

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

XXIII. APPLICABILITY OF NSPS/NESHAP GENERAL PROVISIONS

[40 CFR Part 60, Part 63]

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

DRAFT

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 63224 For Concord Blue Eagar, LLC

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN

[ARS § 49-404.c and -426]

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

II. FACILITY WIDE REQUIREMENTS

A. General Requirements

1. The Permittee shall have on site or on call a person certified in EPA Reference Method 9 unless all Method 9 observations and instantaneous visual surveys required by this permit are conducted as Alternative Method-082 (Digital Camera Operating Technique). The Permittee shall certify the camera and the associated software in accordance with ALT-082 procedures. Any Method 9 observation or instantaneous visual survey required by this permit can be conducted as ALT-082. The results of a Method 9 observation or any instantaneous visual survey conducted as ALT-082 shall be obtained within 30 minutes of completing the Method 9 observation or instantaneous visual survey.

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

2. The Permittee shall operate and maintain all equipment according to manufacturer's specifications. If manufacturer's specifications are not available, the Permittee shall prepare and follow an Operations and Maintenance Plan (O&M), which provides adequate information to properly operate and maintain the equipment.

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

3. The Permittee shall maintain onsite a copy of the manufacturer's specifications or O&M plan for all equipment onsite.

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

4. The Permittee shall maintain and provide upon request by ADEQ staff, logs of all emission related maintenance activities performed on the emissions units.

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

5. *The Permittee shall only vent syngas to the flare during startup, shutdown, and emergency situations.*

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

[Material Permit Conditions are indicated with underline and italics]

B. Combined Emission limitations

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

[Material Permit Conditions are indicated with underline and italics]

1. HCl

- a. *The Permittee shall not cause to be discharged into the atmosphere from the stacks associated with the Dresser Rand engines and the multi-fuel*

burner, combined HCL emissions in excess of 0.5 lb/hr.

2. Carbon Monoxide

- a. The Permittee shall not cause to be discharged into the atmosphere from each of the stacks associated with the Dresser Rand engines, carbon monoxide in excess of 9.15 lb/hr.
- b. The Permittee shall not cause to be discharged into the atmosphere from the stack associated with the multi-fuel burner, carbon monoxide in excess of 1.85 lb/hr.

3. Nitrogen Oxides

- a. The Permittee shall not cause to be discharged into the atmosphere from each of the stacks associated with the Dresser Rand engines, nitrogen oxides (NO_x) in excess of 4.13 lb/hr.
- b. The Permittee shall not cause to be discharged into the atmosphere from the stack associated with the multi-fuel burner, nitrogen oxides (NO_x) in excess of 0.88 lb/hr.

C. Recordkeeping Requirements

The Permittee shall maintain daily records of the amount of biomass in units of tons being fed into the pyrolysis system.

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

D. Testing Requirements

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

1. Within 180 days of start-up of the facility, the Permittee shall conduct performance tests for the following pollutants being emitted from the stack of the multi-fuel burner and the Dresser Rand engines to demonstrate compliance with the emission limits in Conditions II.B.1 through II.B.3.
 - a. EPA Reference Method 26A for HCl.
 - b. EPA Reference Method 10 or an approved alternate test method for CO.
 - c. EPA Reference Method 7 or an approved alternative test method for NO_x.
2. Performance tests shall be conducted at maximum representative capacity for the facility.
3. Performance tests for the multi-fuel burner shall be conducted at maximum representative capacity during which both syngas and soy methyl ester (SME) is being fired.
4. Subsequent performance tests for HCl, CO and NO_x shall be conducted during the final year of the permit term.

III. MULTI-FUEL BURNER

A. Fuel Limitation

The Permittee shall only fire propane and/or syngas in one burner tip of the multi-fuel burner, and soy methyl ester in the other burner tip.

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

B. Particulate Matter and Opacity

1. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from the multi-fuel burner in excess of the amounts calculated by one of the following equations:

a. For equipment having a heat input rate of 4200 million Btu per hour or less, the maximum allowable emissions shall be determined by the following equation:

[A.A.C. R18-2-724.C.1]

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

Where:

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

Q = The heat input in million Btu per hour.

2. Opacity

The owner or operator shall report all six-minute periods in which the opacity of any plume or effluent exceeds 15%.

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

C. Air Pollution Control Requirements

[A.A.C. R18-2-306.01, 306.A.2, and A.A.C. R18-2-331.A.3.d and e]
[Material Permit Conditions are indicated with underline and italics]

1. *The Permittee shall install, maintain, and operate a baghouse or cartridge filter in a manner consistent with good air pollution control practice to control particulate emissions from the exhaust of the multi-fuel burner.*

D. Monitoring, Recordkeeping, and Reporting Requirements

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

The Permittee shall conduct a monthly EPA Reference Method 22 survey of visible emissions emanating from the stack of the multi-fuel burner. If the opacity of the emissions observed appears to exceed the standard, the Permittee shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial Method 22 survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date & time of observation, and the results of the observation. If the observation shows a Method 9 opacity reading in excess of 15%, the Permittee shall report this to ADEQ as an excess emission and initiate appropriate corrective action to reduce the opacity below 15%. The Permittee shall keep a record of the corrective action performed.

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

E. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-724.J, and -724.C.

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

IV. INTERNAL COMBUSTION ENGINES

A. Internal Combustion Engines Subject to 40 CFR 60 Subpart IIII

1. Applicability

This Section is subject to the horizontal chipper engine and the fire pump engine identified in Attachment "C" of this permit.

2. General Requirements

a. Operating Requirements

(1) The Permittee shall operate and maintain the engines according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. A copy of the instructions or procedures shall be kept onsite and made available to ADEQ upon request.

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

(2) The Permittee shall only change those engine settings that are permitted by the manufacturer.

[40 CFR 60.4211(a)]

(3) The Permittee shall meet the applicable requirements of 40 CFR Parts 89, 94, or 1068.

[40 CFR 60.4211(a)]

(4) The engine must be installed and configured according to the manufacturer's emission -related specifications.

[40 CFR 60.4211(c)]

(5) The Permittee shall operate and maintain the internal combustion engines according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer over the entire life of the engine.

[40 CFR 60.4206]

b. Fuel Requirements

(1) The Permittee shall only fire diesel fuel in the engines that meets the following requirements of 40 CFR 80.510(b):

(a) Sulfur content: 15 ppm maximum; and

(b) A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

[40 CFR 60.4207(b)]

c. Additional Requirement for the Emergency Fire Pump Engine

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

[40 CFR 60.4209(a) and A.A.C. R18-2-331.A.3.c]

[Material permit conditions are indicated by underline and italics]

- (2) The Permittee shall operate the emergency stationary ICE according to Condition IV.A.2.c(2)(a) through Condition IV.A.2.c(2)(c). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited.

[40 CFR 60.4211(f)]

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

[40 CFR 60.4211(f)(1)]

- (b) The Permittee may operate the emergency stationary ICE for any combination of the purposes specified below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition IV.A.2.c(2)(c) counts as part of the 100 hours per calendar year.

[40 CFR 60.4211(f)(2)]

- (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

[40 CFR 60.4211(f)(2)(i)]

- (ii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

[40 CFR 60.4211(f)(2)(iii)]

- (c) Emergency stationary ICE may be operated for up to 50

hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing.

[40 CFR 60.4211(f)(3)]

3. Emission Limitations and Standards

a. Emergency Fire Pump Engine

The Permittee shall comply with the following emission limits for the emergency fire pump engine.

[40 CFR 60.4205(c)]

| Maximum Engine Power (EP) (horsepower) | Model year | Emission Standard (g/HP-hr) | | |
|--|------------------|-----------------------------|-----------------|-----|
| | | PM | NO _x | CO |
| 75 ≤ EP < 100 | 2010 and earlier | 0.60 | 7.8 | 3.7 |
| | 2011 and later | 0.30 | 3.5 | N/A |
| 100 ≤ EP < 175 | 2009 and earlier | 0.60 | 7.8 | 3.7 |
| | 2010 and later | 0.22 | 3.0 | N/A |

- (1) For model years 2010 through 2012, fire pump engines that are greater than 100 horsepower, but less than 175 horsepower with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[Note 2 to Table 4 to 40 CFR Subpart IIII]

b. Horizontal Chipper Engine

The Permittee shall meet the emission standards for new nonroad compression ignition engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

[40 CFR 60.4201(a)]

c. Compliance Demonstrations

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

[40 CFR 60.4211(g)]

- (a) For a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for

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

[40 CFR 60.4211(g)(2)]

4. Permit Shield

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

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

B. Internal Combustion Engines Subject to 40 CFR 60 Subpart JJJJ

1. Applicability

This Section is subject to the Dresser Rand Engines identified in Attachment "C" of this permit.

2. Fuel Requirements

The Permittee shall only burn syngas in the engines applicable to this section.

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

3. Emission Standards

a. The Permittee shall operate and maintain the stationary SI ICE that achieves the emission standards as required by this Section over the entire life of the engine.

[40 CFR 60.4234]

b. The Permittee shall operate and maintain the engines such that they comply with the emission standards in the following table:

[40 CFR 60.4233(e), Table 1 to 40 CFR 60 Subpart JJJJ]

| Emission Standards | | | | | |
|--------------------|-----|-----|-----------------------------|-----|-----|
| g/HP-hr | | | ppmvd at 15% O ₂ | | |
| NO _x | CO | VOC | NO _x | CO | VOC |
| 2.0 | 5.0 | 1.0 | 150 | 610 | 80 |

4. Compliance Demonstration

a. The Permittee shall comply with the emission standards specified in Condition IV.B.3.b by purchasing an engine certified to those emission standards.

[40 CFR 60.4243(b)]

- b. If the Permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the Permittee shall keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The Permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as applicable. If the Permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the stationary SI internal combustion engine will not be considered out of compliance.

[40 CFR 60.4243(a)(1)]

5. Notification, Reporting, and Recordkeeping Requirements

- a. The Permittee shall meet the following recordkeeping requirements:

[40 CFR 60.4245(a)]

- (1) Records of all notifications submitted to comply with this Section and all documentation supporting any notification.
- (2) Maintenance conducted on the engine.
- (3) If the stationary SI ICE is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.

6. Permit Shield

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

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

V. MATERIAL HANDLING, FLARE, HORIZONTAL CHIPPER, AND BIOMASS DRYER OPERATIONS

A. Applicability

This Section is applicable to the flare, horizontal chipper, indirect thermal biomass dryer, biomass system, biochar system, and handling activities

A. Operating Limitations

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

[A.A.C. R18-2-730.D]

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

3. 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]

4. Permit Shield

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

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

B. Nitrogen Oxides

1. Emission Limitations

The Permittee shall not cause, allow or permit the discharge of nitrogen oxides, from the stacks of the fuel burning equipment, into the atmosphere in excess of 500 parts per million.

[A.A.C. R18-2-730.A.3]

2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.A.3.

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

C. Sulfur Dioxide

1. Emission Limitations

The Permittee shall not cause, allow or permit the discharge of sulfur dioxide, from the stacks of the fuel burning equipment, into the atmosphere in excess of 600 parts per million.

[A.A.C. R18-2-730.A.2]

2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.A.2.

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

D. Particulate Matter and Opacity

1. Emission Limitations/Standards

- a. Particulate Matter

The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any 1-hour from the emissions sources

applicable to this section in total quantities in excess of the amount calculated by the following equation:

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

where:

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

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

[A.A.C. R18-2-730.A.1.a]

b. Opacity

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any emissions sources applicable to this section, opacity which exceeds 20% as measured by EPA Reference Method 9.

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

c. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement in this Section, the exceedance shall not constitute a violation of the applicable opacity limit.

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

E. Air Pollution Control Equipment

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

[Material Permit Conditions are indicated with underline and italics]

1. *The Permittee shall install, maintain, and operate a fabric filter or cartridge filter, in a manner consistent with good air pollution control practice to control particulate emissions from the biochar storage silo and bagging operation.*

2. *The Permittee shall install, maintain, and operate a fabric filter or cartridge filter, in a manner consistent with good air pollution control practice to control particulate emissions from the air density separator/24-hour storage silo associated with the biomass system.*

F. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall conduct a monthly EPA Reference Method 9 observation of emissions emanating from the sources subject to this section. The Permittee shall keep a record of the name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition IV.A.1.b, the Permittee shall take corrective action and log all such actions. Such exceedances shall be reported as excess emissions in accordance with Condition XII.A.1 of Attachment "A".

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

B. Permit Shield

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

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-730.A.1, -702.B.2, -702.B.3, -702.C, 730.A, 730.D, -730.F, and -730.G.

VI. COOLING TOWER REQUIREMENTS

A. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Particulate Matter

The Permittee shall not cause, allow, or permit the discharge of particulate matter into the atmosphere in any 1 hour from the cooling towers in total quantities in excess of the amount calculated by the following equation:

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

where:

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

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

[A.A.C. R18-2-730.A.1]

b. Opacity

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any cooling tower stack, opacity which exceeds 20% as measured by EPA Reference Method 9.

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

c. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement in this Section, the exceedance shall not constitute a violation of the applicable opacity limit.

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

C. Monitoring, Recordkeeping, and Reporting Requirements

The Permittee shall conduct a monthly EPA Reference Method 9 observation of emissions emanating from the cooling tower. The Permittee shall keep a record of the name of the observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition III.A.1.b, the Permittee shall take corrective action and log all such actions. Such exceedances shall be reported as excess emissions in accordance with Condition XII.A.1 of Attachment "A".

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

D. Permit Shield

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

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-730.A.1, A.A.C. R18-2-702.B.3, and A.A.C. R18-2-702.C.

VII. FUGITIVE DUST REQUIREMENTS

A. Applicability

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

B. Particulate Matter and Opacity

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

1. Emission Limitations/Standards

- a. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40% measured in accordance with the Arizona Testing Manual, Reference Method 9.
[A.A.C. R18-2-614]
- b. The Permittee shall not cause, allow or permit visible emissions from any fugitive dust point source, in excess of 20% opacity.
[A.A.C. R18-2-702.B]
- c. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - (1) Keep dust and other types of air contaminants to a minimum in an open area where construction operations, repair operations, demolition activities, clearing operations, leveling operations, or any earth moving or excavating activities are taking place, by good modern practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means;
[A.A.C. R18-2-604.A]
 - (2) Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means;
[A.A.C. R18-2-604.B]
 - (3) Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway is repaired, constructed, or reconstructed;
[A.A.C. R18-2-605.A]
 - (4) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust;
[A.A.C. R18-2-605.B]
 - (5) Take reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods when crushing, handling, or conveying material likely to give rise to airborne dust;
[A.A.C. R18-2-606]
 - (6) Take reasonable precautions such as chemical stabilization, wetting, or covering when organic or inorganic dust producing material is being stacked, piled, or otherwise stored;
[A.A.C. R18-2-607.A]

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

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

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

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

- (9) Operate mineral tailings piles by taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. Reasonable precautions shall mean wetting, chemical stabilization, revegetation or such other measures as are approved by the Director.

[A.A.C R18-2-608]

2. Air Pollution Control Requirements

Haul Roads and Storage Piles

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

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

[Material Permit Condition is indicated by underline and italics]

3. Monitoring and Recordkeeping Requirements

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

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

b. Opacity Monitoring Requirements

- (1) A certified Method 9 observer shall conduct a monthly visual survey of visible emissions from the fugitive dust sources. The Permittee shall keep a record of the name of the observer, the date and location on which the observation was made, and the results of the observation.

- (2) If the observer sees a visible emission from a fugitive dust source that on an instantaneous basis appears to exceed applicable opacity standard, then the observer shall, if practicable, take a six-minute Method 9 observation of the visible emission.

- (a) If the six-minute opacity of the visible emission is less than or equal to applicable opacity standard, the observer shall make a record of the following:

- (i) Location, date, and time of the observation; and
(ii) The results of the Method 9 observation.

- (b) If the six-minute opacity of the visible emission exceeds

applicable opacity standard, then the Permittee shall do the following:

- (i) Adjust or repair the controls or equipment to reduce opacity to below the applicable standard; and
- (ii) Report it as an excess emission under Section XII.A of Attachment "A".

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

4. Permit Shield

Compliance with the conditions of this Section shall be deemed compliance with A.A.C. R18-2-604.A, A.A.C. R18-2-604.B, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, A.A.C. R18-2-608 and A.A.C. R18-2-612.

VIII. MOBILE SOURCE REQUIREMENTS

A. Applicability

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

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

B. Particulate Matter and Opacity

1. Emission Limitations/Standards

a. Off-Road Machinery

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

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

b. Roadway and Site Cleaning Machinery

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

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

- (2) The Permittee shall take reasonable precautions, such as the use

of dust suppressants, before the cleaning of a site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means.

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

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

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

2. Recordkeeping Requirement

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

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

3. Permit Shield

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

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

IX. OTHER PERIODIC ACTIVITIES

A. Abrasive Blasting

1. Particulate Matter and Opacity

a. Emission Limitations/Standards

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

- (1) wet blasting;
- (2) effective enclosures with necessary dust collecting equipment; or
- (3) any other method approved by the Director.

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

b. Opacity

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

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

2. Monitoring and Recordkeeping Requirement

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

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

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

3. Permit Shield

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

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

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations/Standards

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

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

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

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

- (a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or
- (b) Thin or dilute any architectural coating with a photochemically reactive solvent.

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

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

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

percent.

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

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

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

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

b. Monitoring and Recordkeeping Requirements

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

- (a) The date the project was conducted;
- (b) The duration of the project;
- (c) Type of control measures employed;
- (d) Material Safety Data Sheets 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) above.

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

c. Permit Shield

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

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

2. Opacity

a. Emission Limitation/Standard

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

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

b. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard

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

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

2. Monitoring and Recordkeeping Requirement

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

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

3. Permit Shield

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

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

ATTACHMENT "C": EQUIPMENT LIST

**Air Quality Control Permit No. 63224
For
Concord Blue Eagar, LLC**

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|---|--------------------------------------|--|-------------|----------------------------|--|
| BE 1000 - WOODYARD PROCESSING | | | | | |
| Reclaim Chain Conveyor | | 15,868 lb/hr (dry basis) | Vendor TBD | | Unsorted chips from storage or horizontal chipper |
| Sizing Screen | | 15, 868 lb/hr (dry basis) | Vendor TBD | | Unsorted chips from storage or horizontal chipper |
| Overs Bounce Conveyor | | 529 lb/hr (dry basis) | Vendor TBD | | 2"+ material |
| Accepts Conveyor | | 14, 198 lb/hr (dry basis) | Vendor TBD | | 2"- material |
| Air Density Separator | | 14, 198 lb/hr (dry basis) | AcroWood | | Chips, Fines, & Heavies |
| Rejects Bin | | 488 lb/hr (dry basis) | AcroWood | | Heavy rejects |
| Pnematic Conveyor Line | | 13,709 lb/hr (dry basis) | AcroWood | | Chips & Fines |
| Air Fan | | 6,700 acfm max air flow | AcroWood | | Air |
| Cyclone | | 13,709 lb/hr (dry basis) | AcroWood | | Air, Chips, & Fines |
| 24-hour Storage Silo with discharge auger screw | | 5,994 lb/hr discharge (wet basis) | Vendor TBD | | Chips |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|--|-------------------------------|---|--|---------------------|---|
| Dust Collector | | 6,700 acfm; 6,480 dscfm max air flow, 120.26 lb/hr (wet basis) inlet; 68.55 lb/hr (dry basis) | Donaldson Torit DFE3-12 Cartridge Filter or Equivalent; 6,700 acfm; 2.165 grains/dscf inlet loading; .003 grains/dscf outlet | | Particulate Matter; Filter fabric |
| Exhaust Stack with Silencer | | 6,700 acfm max air flow | Vendor TBD | | Air with .003 grains/dscf fine PM |
| Fines Bin with Discharge Auger Screw to Main Discharge Screw | | 120.09 lb/hour (wet basis) inlet; 30 lb/hr discharge (wet basis) | Air tight; Vendor TBD | | Fines |
| Horizontal Chipper | | 1.26 MMBtu/hr; 350 brake horsepower | Morbark Wood Hog 2600; Source of Criteria Pollutants, Greenhouse Gases, and HAPS | | oversize chips, small diameter logs and community brush |
| BE 1500 - FEEDSTOCK DRYING and HANDLING | | | | | |
| Dryer | | 6,017 lb/hr (43% MC basis) inlet; 4,083 lb/hr (16% MC basis) outlet | Kolleman or equivalent 3-stage dryer (pre-heater and 2 stage indirect | | Output is 16% MC Biomass; water vapor and VOCs |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|-------------------------------|-------------------------------|--|---|---------------------|---|
| | | | thermal oil contact dryer) | | |
| Vertical Conveyor | | 4,083 lb/hr | Vendor TBD | | Biomass |
| Receiving Storage | | 4,083 lb/hr | Vendor TBD | | Biomass |
| Distribution Container | | 4,083 lb/hr | Vendor TBD | | Biomass |
| Transport Screw Conveyor | | 2,042 lb/hr | Vendor TBD | | Biomass, dried |
| Transport Screw Conveyor | | 2,042 lb/hr | Vendor TBD | | Biomass, dried |
| BE 2000 - GASIFICATION | | No Air Emissions | | | |
| Preheater | | 8.52 MMBtu/hr (6.5 from propane or syngas and 2.02 from SME) | Source of additional CO and CO2 from combustion of char carryover with heat carrier balls from the Separators. Vendor TBD | | Heat Carrier, Flue Gas |
| Reformer | | | Raw syngas including water vapor; Vendor TBD | | Heat Carrier, SynGas |
| Pyrolyser | | | Raw PyroGas before high temperature reforming; Vendor TBD | | Heat Carrier, PyroGas, Biomass, Steam, Char/Ash |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|-------------------------------|-------------------------------|--|--|---------------------|---|
| Separator II | | | Separates heat carrier balls and biochar; Vendor TBD | | Heat Carrier, PyroGas, Char/Ash Steam |
| Separator I | | | Separates heat carrier balls and biochar; Vendor TBD | | Heat Carrier, PyroGas, Char/Ash Steam |
| Rotary Valve after Separators | | 700 lb/hr | Biochar Mass Flow; Vendor TBD | | Char/Ash |
| BE 3000 - COMBUSTION | | | | | |
| Burner | | 8.52 MMBtu/hr (6.5 from propane or syngas and 2.02 from SME) | Zeeco Multi-Fuel Burner; Source of Criteria Pollutants, Greenhouse Gases and HAPS. | | Propane, syngas, SME and pre-heated air |
| Recycled RME Pump | | | Vendor TBD | | RME, contaminated |
| Product gas blower | | | Normally no flow; Vendor TBD | | Product gas |
| Air Preheater | | | Vendor TBD | | Air, Flue Gas |
| Intake Air Fan | | | Vendor TBD | | Air |
| Ash Conveyor | | | Vendor TBD | | Ash and Nitrogen |
| Double Clap Valve | | | Vendor TBD | | Ash and Nitrogen |
| Screw Conveyor | | | Vendor TBD | | Ash |
| Ash container | | | Vendor TBD | | Ash |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|---|-------------------------------|-------------------------|--|---------------------|---------------------------|
| BE 4000 - PRODUCT GAS PROCESSING | | | | | No Air Emissions |
| BE 5000 - FLUE GAS PROCESSING | | | | | |
| Flue gas dust collector | | 1,119.2 dscfm | Donaldson Torit DFE 2-4 Cartridge Filter of equivalent; inlet loading: 1.531147 lb/hr & 0.1596 grains/dscf; outlet loading: .02877 lb/hr & 0.003 grains/dscf | | Flue gas with particulate |
| Rotary or flap valve | | | Vendor TBD | | Flue Gas, Ash |
| Ash Bin | | | Vendor TBD | | Ash |
| Stack | | | Vendor TBD | | Flue Gas |
| BE 6000 - FLARE | | | | | |
| Packaged Flare System | | 21 MMBtu/hr rating | Zeeco Elevated flare with propane pilot; | | Propane, syngas, air |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|-------------------------------------|-------------------------------|-------------------------|---|---------------------|---------------------------------|
| Packaged Flare Stack Exhaust System | | | Intermittent Source of Criteria Pollutants, Greenhouse Gases, HAPS | | Exhaust |
| Combustion Air Blower | | | | | Air |
| BE 7000 - BIOCHAR | | | | | |
| Jacketed Cooling Screw Auger | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Receiving Hopper | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Helix Conveyor #1 | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Transition Hopper | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Chain Disc Conveyor | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Helix Conveyor #2 | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Discharge Chute | | | 700 lb/hr | | Biochar particles ≤ 1mm |
| Storage Silo-- | | | 2.6 days; 2624 ft ³ | | Biochar particles ≤ 1mm |
| Double Flap Valve | | | 4,000 lb/hr | | Biochar particles ≤ 1mm |
| Bagging Platform with Load Cell | | | | | Biochar particles ≤ 1mm |
| Bagger Vacuum Line with Breaker | | | 71.64 lb/hr | | Biochar particles ≤ 220 microns |
| Silo Vent Line | | | 12.54 lb/hr | | Biochar particles ≤ 220 microns |
| Dust Collector | | 2,032 acfm; 1,965 dscfm | Donaldson Torit DFE 2-4 Cartridge Filter or equivalent; 5 grain/dscf inlet; 84.18 lb/hr inlet; .003 | | Biochar particles ≤ 220 microns |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|-----------------------------------|-------------------------------|-------------------------|---|---------------------|--------------------------------------|
| | | | grain/dscf outlet | | |
| | | | | | |
| BE 8000 - POWER GENERATION | | | | | |
| Internal Combustion Engine 1 | | 7.187 MMBtu/hr | Dresser Rand SFGLD 560 Reciprocating Lean Burn Engine | | Pre-heated Syngas and Pre-heated Air |
| Exhaust Gas Heat Exchanger 1 | | | | | Exhaust Gas + Thermal Oil |
| Exhaust Gas Stack | | | Source of Criteria Pollutants, Greenhouse Gases, HAPS | | Exhaust Gas |
| Internal Combustion Engine 2 | | 7.187 MMBtu/hr | Dresser Rand SFGLD 560 Reciprocating Lean Burn Engine | | Pre-heated Syngas and Pre-heated Air |
| Exhaust Gas Heat Exchanger 2 | | | | | Exhaust Gas + Thermal Oil |
| Exhaust Gas Stack | | | Source of Criteria Pollutants, Greenhouse Gases, HAPS | | |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|---|-------------------------------|-------------------------|------------|---------------------|------------------------------|
| BE 10100 - PROPANE | | | | | No Air Emissions |
| BE 10200 - NITROGEN | | | | | No Air Emissions |
| BE 10300 - COOLING WATER | | | | | Evaporation and Drift |
| Cooling Tower (Cell 1) | | | Vendor TBD | | Water |
| Cooling Tower (Cell 2) | | | Vendor TBD | | Water |
| Cooling Water Pump | | | Vendor TBD | | Water |
| Cooling Water Pump | | | Vendor TBD | | Water |
| Blowdown Pump | | | Vendor TBD | | Water |
| BE 10400 - WATER TREATMENT | | | | | No Air Emissions |
| BE 10500 - COMPRESSED / INSTRUMENT AIR | | | | | No Air Emissions |
| BE 10600 - SME | | | | | No Air Emissions |
| RME Storage Tank | | | Vendor TBD | | RME |
| Pump | | | Vendor TBD | | RME (Biodiesel) |
| Pump | | | Vendor TBD | | RME (Biodiesel) |
| Pump | | | Vendor TBD | | TBD |
| Oil-Water Separator | | | Vendor TBD | | TBD |

| Equipment Description | Equipment ID or Serial Number | CFM, lb/hr, or MMBtu/hr | Make | Date of Manufacture | |
|-------------------------------|-------------------------------|-------------------------|------|---------------------|--|
| BE 10700 - THERMAL OIL | | No Air Emissions | | | |

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