STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
TITLE V PERMIT

TO OPERATE AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Blue Mountain Production Company
31 County Road 827
Highway 15 South
Blue Mountain, Mississippi
Tippah County

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with Title V of the Federal Clean Air Act (42 U.S.C.A. § 7401 - 7671) and the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Permit Issued: March 22, 2010

Effective Date: As specified herein.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Expires: February 28, 2015 **Permit No.: 2620-00003**

Permit Modified: March 20, 2013

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SECTION 1. GENERAL CONDITIONS

1.1 The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Federal Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (Ref.: APC-S-6, Section III.A.6.a.)

1.2 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. (Ref.: APC-S-6, Section III.A.6.b.)

1.3 This permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. (Ref.: APC-S-6, Section III.A.6.c.)

1.4 This permit does not convey any property rights of any sort, or any exclusive privilege. (Ref.: APC-S-6, Section III.A.6.d.)

1.5 The permittee shall furnish to the DEQ within a reasonable time any information the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permittee or, for information to be confidential, the permittee shall furnish such records to DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality. (Ref.: APC-S-6, Section III.A.6.e.)

1.6 The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby. (Ref.: APC-S-6, Section III.A.5.)

1.7 The permittee shall pay to the DEQ an annual permit fee. The amount of fee shall be determined each year based on the provisions of regulated pollutants for fee purposes and the fee schedule specified in the Commission on Environmental Quality's order which shall be issued in accordance with the procedure outlined in Regulation APC-S-6.

(a) For purposes of fee assessment and collection, the permittee shall elect for actual or allowable emissions to be used in determining the annual quantity of emissions unless the Commission determines by order that the method chosen by the applicant for calculating actual emissions fails to reasonably represent actual emissions. Actual

emissions shall be calculated using emission monitoring data or direct emissions measurements for the pollutant(s); mass balance calculations such as the amounts of the pollutant(s) entering and leaving process equipment and where mass balance calculations can be supported by direct measurement of process parameters, such direct measurement data shall be supplied; published emission factors such as those relating release quantities to throughput or equipment type (e.g., air emission factors); or other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best engineering judgments where such judgments are derived from process and/or emission data which supports the estimates of maximum actual emission. (Ref.: APC-S-6, Section VI.A.2.)

(b) If the Commission determines that there is not sufficient information available on a facility's emissions, the determination of the fee shall be based upon the permitted allowable emissions until such time as an adequate determination of actual emissions is made. Such determination may be made anytime within one year of the submittal of actual emissions data by the permittee. (Ref.: APC-S-6, Section VI.A.2.) If at any time within the year the Commission determines that the information submitted by the permittee on actual emissions is insufficient or incorrect, the permittee will be notified of the deficiencies and the adjusted fee schedule. Past due fees from the adjusted fee schedule will be paid on the next scheduled quarterly payment time. (Ref.: APC-S-6, Section VI.D.2.)

(c) The fee shall be due September 1 of each year. By July 1 of each year the permittee shall submit an inventory of emissions for the previous year on which the fee is to be assessed. The permittee may elect a quarterly payment method of four (4) equal payments; notification of the election of quarterly payments must be made to the DEQ by the first payment date of September 1. The permittee shall be liable for penalty as prescribed by State Law for failure to pay the fee or quarterly portion thereof by the date due. (Ref.: APC-S-6, Section VI.D.)

(d) If in disagreement with the calculation or applicability of the Title V permit fee, the permittee may petition the Commission in writing for a hearing in accordance with State Law. Any disputed portion of the fee for which a hearing has been requested will not incur any penalty or interest from and after the receipt by the Commission of the hearing petition. (Ref.: APC-S-6, Section VI.C.)

1.8 No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (Ref.: APC-S-6, Section III.A.8.)

1.9 Any document required by this permit to be submitted to the DEQ shall contain a certification by a responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (Ref.: APC-S-6, Section II.E.)

1.10 The permittee shall allow the DEQ, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to perform the following:

(a) enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;

(b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this 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; and

(d) as authorized by the Federal Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. (Ref.: APC-S-6, Section III.C.2.)

1.11 Except as otherwise specified or limited herein, the permittee shall have necessary sampling ports and ease of accessibility for any new air pollution control equipment, obtained after May 8, 1970, and vented to the atmosphere. (Ref.: APC-S-1, Section 3.9(a))

1.12 Except as otherwise specified or limited herein, the permittee shall provide the necessary sampling ports and ease of accessibility when deemed necessary by the Permit Board for air pollution control equipment that was in existence prior to May 8, 1970. (Ref.: APC-S-1, Section 3.9(b))

1.13 Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance where such applicable requirements are included and are specifically identified in the permit or where the permit contains a determination, or summary thereof, by the Permit Board that requirements specifically identified previously are not applicable to the source. (Ref.: APC-S-6, Section III.F.1.)

1.14 Nothing in this permit shall alter or affect the following:

(a) the provisions of Section 303 of the Federal Act (emergency orders), including the authority of the Administrator under that section;

(b) the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

(c) the applicable requirements of the acid rain program, consistent with Section 408(a) of the Federal Act.

(d) the ability of EPA to obtain information from a source pursuant to Section 114 of the

Federal Act. (Ref.: APC-S-6, Section III.F.2.)

1.15 The permittee shall comply with the requirement to register a Risk Management Plan if permittee's facility is required pursuant to Section 112(r) of the Act to register such a plan. (Ref.: APC-S-6, Section III.H.)

1.16 Expiration of this permit terminates the permittee's right to operate unless a timely and complete renewal application has been submitted. A timely application is one which is submitted at least six (6) months prior to expiration of the Title V permit. If the permittee submits a timely and complete application, the failure to have a Title V permit is not a violation of regulations until the Permit Board takes final action on the permit application. This protection shall cease to apply if, subsequent to the completeness determination, the permittee fails to submit by the deadline specified in writing by the DEQ any additional information identified as being needed to process the application. (Ref.: APC-S-6, Section IV.C.2., Section IV.B., and Section II.A.1.c.)

1.17 The permittee is authorized to make changes within their facility without requiring a permit revision (ref: Section 502(b)(10) of the Act) if:

(a) the changes are not modifications under any provision of Title I of the Act;

(b) the changes do not exceed the emissions allowable under this permit;

(c) the permittee provides the Administrator and the Department with written notification in advance of the proposed changes (at least seven (7) days, or such other time frame as provided in other regulations for emergencies) and the notification includes:

(1) a brief description of the change(s),

(2) the date on which the change will occur,

(3) any change in emissions, and

(4) any permit term or condition that is no longer applicable as a result of the change;

(d) the permit shield shall not apply to any Section 502(b)(10) change. (Ref.: APC-S-6, Section IV.F.)

1.18 Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule or, in the absence of an approved schedule, with the appropriate requirements specified in Regulation APC-S-3, "Regulations for the Prevention of Air Pollution Emergency Episodes" for the level of emergency declared. (Ref.: APC-S-3)

1.19 Except as otherwise provided herein, a modification of the facility may require a Permit to Construct in accordance with the provisions of Regulations APC-S-2, "Permit Regulations for the Construction and/or Operation of Air Emissions Equipment", and may require modification of this permit in accordance with Regulations APC-S-6, "Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act". Modification is defined as "[a]ny physical change in or change in the method of operation of a facility which increases the actual emissions or the potential uncontrolled emissions of any air pollutant subject to regulation under the Federal Act emitted into the atmosphere by that facility or which results in the emission of any air pollutant subject to regulation under the Federal Act into the atmosphere not previously emitted. A physical change or change in the method of operation shall not include:

(a) routine maintenance, repair, and replacement;

(b) use of an alternative fuel or raw material by reason of an order under Sections 2 (a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

(c) use of an alternative fuel by reason of an order or rule under Section 125 of the Federal Act;

(d) use of an alternative fuel or raw material by a stationary source which:

(1) the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166; or

(2) the source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166;

(e) an increase in the hours of operation or in the production rate unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Subpart I or 40 CFR 51.166; or

(f) any change in ownership of the stationary source."

1.20 Any change in ownership or operational control must be approved by the Permit Board. (Ref.: APC-S-6, Section IV.D.4.)

1.21 This permit is a Federally-approved operating permit under Title V of the Federal Clean Air Act as amended in 1990. All terms and conditions, including any designed to limit the source's potential to emit, are enforceable by the Administrator and citizens under the

Federal Act as well as the Commission. (Ref.: APC-S-6, Section III.B.1)

1.22 Except as otherwise specified or limited herein, the open burning of residential, commercial, institutional, or industrial solid waste, is prohibited. This prohibition does not apply to infrequent burning of agricultural wastes in the field, silvicultural wastes for forest management purposes, land-clearing debris, debris from emergency clean-up operations, and ordnance. Open burning of land-clearing debris must not use starter or auxiliary fuels which cause excessive smoke (rubber tires, plastics, etc.); must not be performed if prohibited by local ordinances; must not cause a traffic hazard; must not take place where there is a High Fire Danger Alert declared by the Mississippi Forestry Commission or Emergency Air Pollution Episode Alert imposed by the Executive Director and must meet the following buffer zones.

(a) Open burning without a forced-draft air system must not occur within 500 yards of an occupied dwelling.

(b) Open burning utilizing a forced-draft air system on all fires to improve the combustion rate and reduce smoke may be done within 500 yards of but not within 50 yards of an occupied dwelling.

(c) Burning must not occur within 500 yards of commercial airport property, private air fields, or marked off-runway aircraft approach corridors unless written approval to conduct burning is secured from the proper airport authority, owner or operator. (Ref.: APC-S-1, Section 3.7)

1.23 Except as otherwise specified herein, the permittee shall be subject to the following provision with respect to emergencies.

(a) Except as otherwise specified herein, an "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires 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.

(b) An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in (c) following are met.

(c) The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:

(1) an emergency occurred and that the permittee can identify the cause(s) of the emergency;

(2) the permitted facility was at the time being properly operated;

(3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

(4) the permittee submitted notice of the emergency to the DEQ within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(d) In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(e) This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein. (Ref.: APC-S-6, Section III.G.)

1.24 Except as otherwise specified herein, the permittee shall be subject to the following provisions with respect to upsets, startups, shutdowns and maintenance.

(a) Upsets (as defined by APC-S-1, Section 2.37)

(1) The occurrence of an upset constitutes an affirmative defense to an enforcement action brought for noncompliance with emission standards or other requirements of Applicable Rules and Regulations or any applicable permit if the permittee demonstrates through properly signed contemporaneous operating logs, or other relevant evidence that include information as follows:

(i) an upset occurred and that the permittee can identify the cause(s) of the upset;

(ii) the source was at the time being properly operated;

(iii) during the upset the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of Applicable Rules and Regulations or any applicable permit;

(iv) the permittee submitted notice of the upset to the DEQ within 5 working days of the time the upset began; and

(v) the notice of the upset shall contain a description of the upset, any steps

taken to mitigate emissions, and corrective actions taken.

(2) In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

(3) This provision is in addition to any upset provision contained in any applicable requirement.

(b) Startups and Shutdowns (as defined by APC-S-1, Sections 2.34 & 2.29)

(1) Startups and shutdowns are part of normal source operation. Emissions limitations applicable to normal operation apply during startups and shutdowns except as follows:

(i) when sudden, unavoidable breakdowns occur during a startup or shutdown, the event may be classified as an upset subject to the requirements above;

(ii) when a startup or shutdown is infrequent, the duration of excess emissions is brief in each event, and the design of the source is such that the period of excess emissions cannot be avoided without causing damage to equipment or persons; or

(iii) when the emissions standards applicable during a startup or shutdown are defined by other requirements of Applicable Rules and Regulations or any applicable permit.

(2) In any enforcement proceeding, the permittee seeking to establish the applicability of any exception during a startup or shutdown has the burden of proof.

(3) In the event this startup and shutdown provision conflicts with another applicable requirement, the more stringent requirement shall apply.

(c) Maintenance.

(1) Maintenance should be performed during planned shutdown or repair of process equipment such that excess emissions are avoided. Unavoidable maintenance that results in brief periods of excess emissions and that is necessary to prevent or minimize emergency conditions or equipment malfunctions constitutes an affirmative defense to an enforcement action brought for noncompliance with emission standards, or other regulatory requirements if the permittee can demonstrate the following:

(i) the permittee can identify the need for the maintenance;

(ii) the source was at the time being properly operated;

(iii) during the maintenance the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements of Applicable Rules and Regulations or any applicable permit;

(iv) the permittee submitted notice of the maintenance to the DEQ within 5 working days of the time the maintenance began or such other times as allowed by DEQ; and

(v) the notice shall contain a description of the maintenance, any steps taken to mitigate emissions, and corrective actions taken.

(2) In any enforcement proceeding, the permittee seeking to establish the applicability of this section has the burden of proof.

(3) In the event this maintenance provision conflicts with another applicable requirement, the more stringent requirement shall apply. (Ref.: APC-S-1, Section 10)

1.25 The permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M, as adopted by reference in Regulation APC-S-1, Section 8. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

SECTION 2. EMISSION POINTS & POLLUTION CONTROL DEVICES

Emission Point	Description
AA-001	42 MMBTUH natural gas-, fuel oil-, and waste oil-fired RVM dryer with a scrubber.
AA-002	Packaging baghouse which controls emissions from the de-dusting and product packaging operations, six storage silos, and a 75' centrifugal bucket elevator.
AA-003	Fine granule production system baghouse which controls emissions from the fine product storage, transport, and packaging operations.
AA-004	Fine grinding baghouse which controls emissions from the RVM dried clay milling, screening, and fine product handling operations.
AA-005	Packaging baghouse which controls emissions from the equipment associated with the cat litter packaging operation.
AA-006	Bag dump station #1 with a flexible screw conveyor, feeder, and filter cartridge.
AA-007	Bag dump station #2 with a flexible screw conveyor, feeder, and filter cartridge.
AA-008	Bag dump station #3 with a flexible screw conveyor, feeder, and filter cartridge.
AA-009	Bag dump station #4 with a flexible screw conveyor, feeder, and filter cartridge.
AA-010	Bag dump station #5 with a flexible screw conveyor, feeder, and filter cartridge.
AA-011	Bag dump station #6 with a flexible screw conveyor, feeder, and filter cartridge.

SECTION 3. EMISSION LIMITATIONS & STANDARDS

A. Facility-Wide Emission Limitations & Standards

3.A.1 Except as otherwise specified or limited herein, the permittee shall not cause, permit, or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial or waste disposal process which exceeds forty (40) percent opacity subject to the exceptions provided in (a) & (b).

(a) Startup operations may produce emissions which exceed 40% opacity for up to fifteen (15) minutes per startup in any one hour and not to exceed three (3) startups per stack in any twenty-four (24) hour period.

(b) Emissions resulting from soot blowing operations shall be permitted provided such emissions do not exceed 60 percent opacity, and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel in any one hour. (Ref.: APC-S-1, Section 3.1)

3.A.2 Except as otherwise specified or limited herein, the permittee shall not cause, allow, or permit the discharge into the ambient air from any point source or emissions, any air contaminant of such opacity as to obscure an observer's view to a degree in excess of 40% opacity, equivalent to that provided in Paragraph 3.A.1. This shall not apply to vision obscuration caused by uncombined water droplets. (Ref.: APC-S-1, Section 3.2)

B. Emission Point Specific Emission Limitations & Standards

Emission Point(s)	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limit/Standard
AA-001	Federally enforceable Permit to Construct issued November 25, 1997. 40 CFR 60.732(a) 40 CFR 60.672(a)(1) & (a)(2) APC-S-1, Section 4.1(a) APC-S-1, Section 4.2(a) APC-S-1, Section 3.4(a)(2) APC-S-1, Section 3.6(a)	3.B.1 3.B.2 3.B.3 3.B.4 3.B.5 3.B.6 3.B.7 3.B.8	SO_2	56.7 lbs/hr and 249.0 tons/year
				4.8 lb/MMBTUH
				500 ppm (volume)
			PM	$E_p = 0.057*(Q_{uuu}/Q_t) + 0.05*(Q_{ooo}/Q_t)$; not to exceed 7.8 lbs/hr and 34.3 tons/year
				$E = 0.8808*(I)^{-0.1667}$
				$E = 4.1*(p)^{0.67}$
			Fuel Restriction	Natural gas, virgin fuel oil, and on-specification used oil with no more than 1.0% sulfur by weight.
AA-002	40 CFR 60.672(a)(1) & (a)(2) APC-S-1, Section 3.6(a)	3.B.4 3.B.8	PM	0.032 grams/dscm
				$E = 4.1*(p)^{0.67}$
AA-003	40 CFR 60.672(a)(1) & (a)(2) APC-S-1, Section 3.6(a)	3.B.4 3.B.8	PM	0.05 grams/dscm
				$E = 4.1*(p)^{0.67}$
			Opacity	$\leq$ 7%
AA-004	40 CFR 60.672(a)(1) & (a)(2) APC-S-1, Section 3.6(a)	3.B.4 3.B.8	PM	0.05 grams/dscm
				$E = 4.1*(p)^{0.67}$
			Opacity	$\leq$ 7%
AA-005	40 CFR 60.672(a)(1) & (a)(2) APC-S-1, Section 3.6(a)	3.B.4 3.B.8	PM	0.032 grams/dscm
				$E = 4.1*(p)^{0.67}$

3.B.1 For Emission Point AA-001, the permittee is limited by and shall comply with the Federally enforceable Permit to Construct issued November 25, 1997, including limited particulate matter emissions to 7.8 pounds per hour and 34.3 tons per year, and sulfur dioxide emissions to 56.7 pounds per hour and 249.0 tons per year. (Ref.: Federally-enforceable Permit to Construct issued November 25, 1997)

3.B.2 Emission Point AA-001 is subject to the emission limitations and other requirements of New Source Performance Standards, 40 CFR 60, Subpart A, Subpart OOO (as described in Permit Condition 3.B.4), and Subpart UUU, General Provisions and Standards of Performance for Calciners and Dryers in Mineral Industries, and shall be operated in accordance with the emission limitations and monitoring requirements specified herein.

No emissions shall be discharged into the atmosphere that:

(A) Contains particulate matter in excess of 0.092 gram per dry standard cubic meter (g/dscm) [0.040 grain per dry standard cubic foot (gr/dscf)] for calciners and for calciners and dryers installed in series and in excess of 0.057 g/dscm for dryers; and

(B) Exhibits greater than 10 percent opacity, unless the emissions are discharged from an affected facility using a wet scrubbing control device.

(Ref.: 40 CFR 60.732)

For Emission Point AA-001, the permittee shall limit particulate matter and PM_{10} emissions from the scrubber on a pro-rated basis per the following equation. Emissions from the dryer and cooler are limited to 0.057 grams/dscm, as specified in 40 CFR 60.732(a). Emissions from the material sizing and handling operation are limited to 0.05 grams/dscm, as set forth in 40 CFR 60.672(a)(1).

$$E_p = 0.057*(Q_{uuu}/Q_t) + 0.05*(Q_{ooo}/Q_t)$$

where E_p = prorated emission standard (grams/dscm), Q_{uuu} = volumetric flowrate from dryer and coolers (dscm/hr), Q_{ooo} = volumetric flowrate from material sizing and handling operations (dscm/hr), and $Q_t = Q_{uuu} + Q_{ooo}$(dscm/hr).

3.B.3 For Emission Point AA-001, the permittee shall use as dryer fuels natural gas, virgin fuel oil with no more than 1.0% sulfur by weight, and on-specification used oil with no more than 1.0% sulfur by weight. (Ref.: Federally-enforceable Permit to Construct issued November 25, 1997)

3.B.4 Emission Points AA-001, AA-002, AA-003, AA-004, and AA-005 are subject to and shall comply with all applicable requirements and limitations of 40 CFR 60, Subpart A – General

Provisions and Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. (Ref.: 40 CFR 60.670)

3.B.5 For Emission Point AA-001, the maximum discharge of sulfur oxides from any fuel-burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input. (Ref.: APC-S-1, Section 4.1(a))

3.B.6 For Emission Point AA-001, except as otherwise provided herein, no person shall cause or permit the emission of gas containing sulfur oxides (measured as sulfur dioxide) in excess of 2,000 ppm (volume) from any process equipment in existence on January 25, 1972, or in excess of 500 ppm (volume) from any process equipment constructed after January 25, 1972. The 500 ppm (volume) requirement shall apply for equipment constructed after January 25, 1972 unless otherwise provided by the Commission. (Ref.: APC-S-1, Section 4.2(a))

3.B.7 For Emission Point AA-001, emissions from installations equal to or greater than 10 million BTU per hour heat input but less than 10,000 million BTU per hour heat input shall not exceed an emission rate as determine by the relationship

$$E = 0.8808*(I)^{-0.1667}$$

where E is the emission rate in pounds per million BTU per hour heat input and I is the heat input in millions of BTU per hour. (Ref.: APC-S-1, Section 3.4(a)(2))

3.B.8 Except as otherwise specified, no person shall cause, permit, or allow the emission of particulate matter in total quantities in any one hour from any manufacturing process, which includes any associated stacks, vents, outlets, or combination thereof, to exceed the amount determined by the relationship

$$E = 4.1*(p)^{0.67}$$

where E is the emission rate in pounds per hour and p is the process weight input rate in tons per hour.

Conveyor discharge of coarse solid matter may be allowed if no nuisance is created beyond the property boundary where the discharge occurs. (Ref.: APC-S-1, Section 3.6(a))

C. Insignificant and Trivial Activity Emission Limitations & Standards

Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limit/Standard
APC-S-1, Section 3.4(a)(1)	3.C.1	PM	0.6 lbs/MMBTU
APC-S-1, Section 4.1(a)	3.C.2	SO_2	4.8 lbs/MMBTU

3.C.1 The maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations of less than 10 million BTU per hour heat input shall not exceed 0.6 pounds per million BTU per hour heat input.

3.C.2 The maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per million BTU heat input.

SECTION 4. COMPLIANCE SCHEDULE

4.1 Unless otherwise specified herein, the permittee shall be in compliance with all requirements contained herein upon issuance of this permit.

4.2 Except as otherwise specified herein, the permittee shall submit to the Permit Board and to the Administrator of EPA Region IV a certification of compliance with permit terms and conditions, including emission limitations, standards, or work practices, by January 31 for the preceding calendar year. Each compliance certification shall include the following:

(a) the identification of each term or condition of the permit that is the basis of the certification;

(b) the compliance status;

(c) whether compliance was continuous or intermittent;

(d) the method(s) used for determining the compliance status of the source, currently and over the applicable reporting period;

(e) such other facts as may be specified as pertinent in specific conditions elsewhere in this permit. (Ref.: APC-S-6, Section III.C.5.a.,c.,&d.)

SECTION 5. MONITORING, RECORDKEEPING & REPORTING REQUIREMENTS

A. General Monitoring, Recordkeeping and Reporting Requirements

5.A.1 The permittee shall install, maintain, and operate equipment and/or institute procedures as necessary to perform the monitoring and recordkeeping specified below.

5.A.2 In addition to the recordkeeping specified below, the permittee shall include with all records of required monitoring information the following:

(a) the date, place as defined in the permit, and time of sampling or measurements;

(b) the date(s) analyses were performed;

(c) the company or entity that performed the analyses;

(d) the analytical techniques or methods used;

(e) the results of such analyses; and

(f) the operating conditions existing at the time of sampling or measurement. (Ref.: APC-S-6, Section III.A.3.b.(1)(a)-(f))

5.A.3 Except where a longer duration is specified in an applicable requirement, 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, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (Ref.: APC-S-6, Section III.A.3.b.(2))

5.A.4 Except as otherwise specified herein, the permittee shall submit reports of any required monitoring by July 31 and January 31 for the preceding six-month period. All instances of deviations from permit requirements must be clearly identified in such reports and all required reports must be certified by a responsible official consistent with APC-S-6, Section II.E. (Ref.: APC-S-6, Section III.A.3.c.(1))

5.A.5 Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) days of the time the deviation began. (Ref.: APC-S-6, Section III.A.3.c.(2))

5.A.6 Except as otherwise specified herein, the permittee shall perform emissions sampling and

analysis in accordance with EPA Test Methods and with any continuous emission monitoring requirements, if applicable. All test methods shall be those versions or their equivalents approved by the DEQ and the EPA.

5.A.7 The permittee shall maintain records of any alterations, additions, or changes in equipment or operation.

B. Specific Monitoring and Recordkeeping Requirements

Emission Point(s)	Pollutant/Parameter Monitored	Monitoring/Recordkeeping Requirement	Condition Number	Applicable Requirement
AA-001	Fuel Usage	Fuel usage/sulfur content of fuel oil	5.B.1 5.B.2	To ensure compliance with Permit Conditions 3.B.1 and 3.B.3
	PM	Stack testing Equipment inspections/equipment operations & maintenance	5.B.3 5.B.4 5.B.8 5.B.9 5.B.10	To ensure compliance with Permit Conditions 3.B.1, 3.B.2, and 3.B.4
	SO_2	Stack testing Equipment inspections/equipment operations & maintenance	5.B.7 5.B.9	To ensure compliance with Permit Conditions 3.B.1 and 3.B.3
	Used oil	Used oil specifications	5.B.6	To ensure compliance with Permit Condition 5.B.6
AA-002 AA-003 AA-004 AA-005	PM	Stack testing Equipment inspections/equipment operations & maintenance	5.B.3 5.B.8 5.B.9 5.B.11	To ensure compliance with Permit Condition 3.B.4

5.B.1 For Emission Point AA-001, the permittee shall record and maintain records of the natural gas and oil fuel usage by type and quantity and the hours of operation on both a daily basis and for each consecutive 365-day period. These records shall include notations of any shipments of used oil received which did not meet the specifications and the disposition of these shipments. The permittee shall report the required monitoring in accordance with Permit Condition 5.A.4. (Ref.: Title V Operating Permit issued March 7, 2000)

5.B.2 For Emission Point AA-001, the permittee shall monitor and maintain records of the sulfur content (percent sulfur by weight) of all oil, whether it is virgin fuel oil or used or used oil through sampling and analysis of each lot or shipment received. The permittee shall report the required monitoring in accordance with Permit Condition 5.A.4. (Ref.: Title V Operating Permit issued March 7, 2000)

5.B.3 Emission Points AA-001 through AA-005 are subject to the monitoring, recordkeeping, reporting, and other requirements of New Source Performance Standards, 40 CFR 60, Subpart A -- General Provisions and Subpart OOO -- Standards of Performance for Nonmetallic Mineral Processing Plants, and shall be operated in accordance with the monitoring requirements specified therein. (Ref.: 40 CFR 60.670-676)

5.B.4 Emission Point AA-001 is subject to the emission limitations and other requirements of New Source Performance Standards, 40 CFR 60, Subpart A -- General Provisions and Subpart UUU -- Standards of Performance for Calciners and Dryers in Mineral Industries, and shall be operated in accordance with the monitoring, recordkeeping, reporting, and other requirements specified therein. (Ref.: 40 CFR 60.730-736)

5.B.5 The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. This file shall be maintained for at least two years following the date of such measurements, maintenance, reports, and records. (Ref.: Title V Operating Permit issued March 7, 2000)

5.B.6 The permittee shall monitor, record, and maintain adequate records showing compliance with 40 CFR Part 279, Used Oil Management Standards. As a minimum, the permittee shall maintain records showing compliance with the on-specification used oil requirements, 40 CFR Part 279.11, for each shipment of used oil received. The following standards from 40 CFR Part 279 are applicable:

> 40 CFR 279.11 *Used oil specifications*. Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation under this part unless it is shown not to exceed any of the allowable levels of the constituents and properties in the specification shown in Table 1. Once used oil that is to be burned for energy recovery has been shown not to exceed any

specification and the person making that showing complies with 40 CFR 279.72, 279.73, and 279.74(b), the used oil is no longer subject to this part.

Table 1 – Used Oil Not Exceeding Any Specification Level Is Not Subject To This Part When Burned For Energy Recovery[1]

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100°F minimum
Total halogens	4,000 ppm maximum[2]

[1]The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (See 40 CFR 279.10(b))

[2]Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under 40 CFR 279.10(b)(1). Such used oil is subject to Subpart H of Part 266 of this chapter rather than this part when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

40 CFR 279.72(a) *Analysis of used oil fuel*. A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of 40 CFR 279.11 by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.

Additionally, for each shipment, the permittee shall maintain records showing the name, address, phone number, and EPA identification number for both the used oil marketer and transporter. The permittee shall report the required monitoring in accordance with Permit Condition 5.A.4.

40 CFR 279.72(b) *Record retention*. A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the specifications for used oil fuel under 40 CFR 279.11, must keep copies of analyses of the used oil (or other information used to make the determination) for three years.

(Ref.: Title V Operating Permit issued March 7, 2000)

5.B.7 For Emission Point AA-001, the permittee shall demonstrate compliance with sulfur dioxide emission limitations, as stated in Permit Condition 3.B.1, by stack testing in accordance with EPA Reference Method 8, and submittal of a stack test report by December 31, 2011, and biennially thereafter. For the purpose of compliance demonstration, the permittee shall operate the facility at its maximum capacity while processing the type of clay with the highest sulfur content and/or potential for emissions of sulfur dioxide. (Ref.: Title V Operating Permit issued March 7, 2000)

5.B.8 For Emission Points AA-001 through AA-005, the permittee shall demonstrate compliance with:

(a) Particulate matter emission limitations, as stated in Permit Conditions 3.B.1 through 3.B.4, by stack testing in accordance with EPA Reference Method 5 or Method 17, where the sample volume is at least 1.70 dscm. For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121°C, to prevent water condensation on the filter; and,

(b) Opacity using Method 9 and the procedures in 40 CFR 60.11.

The testing shall be performed and a stack test report submitted by December 31, 2011, and biennially thereafter. (Ref.: Title V Operating Permit issued March 7, 2000)

5.B.9 The permittee shall submit a written test protocol at least thirty (30) days prior to the scheduled test date(s) to ensure that all test methods and procedures are acceptable to DEQ. Also, the permittee shall notify DEQ in writing at least ten (10) days prior to the scheduled test date(s) so that an observer may be scheduled to witness the test.

5.B.10 For Emission Point AA-001, where a scrubber is used to comply with mass emission limitations, the permittee shall comply with the requirements of New Source Performance Standards and:

(a) The permittee shall install, calibrate, maintain, and operate monitoring systems that measure the pressure differential across the scrubber, the air pressure to the scrubber, and the scrubbing liquid flow rate and pressure to the scrubber. The pressure differential across the scrubber shall be measured and recorded daily. The air pressure to the scrubber, and the scrubbing liquid flow rate and pressure to the scrubber shall be measured continuously and recorded with every work shift of at least three (3) times daily on intervals of eight hours and additionally with any valve of damper change. The pressure monitoring devices must be certified by the manufacturer to be accurate within $\pm$ 1 inch of water column gauge pressure. The liquid flow rate monitoring device must be certified by the manufacturer to be accurate within $\pm$ 5

percent design scrubbing liquid flow rate. All monitoring devices required under this paragraph shall be recalibrated annually in accordance with the manufacturer's instructions.

(b) The permittee shall maintain an inventory of spare parts including nozzles, spray bars, monitoring devices, etc.

(c) The permittee shall perform monthly inspections of the scrubber interior for nozzle wear and plugging, and material build-up. Maintenance shall be performed as needed; however, removal of material build-up shall occur at least monthly.

5.B.11 For Emission Points AA-002, AA-003,AA-004, and AA-005, where the permittee uses baghouses to comply with mass emission limitations:

(a) The permittee shall perform quarterly internal inspections, including the use of The Visolite Fluorescent Powder Leak Detection System, or comparable system.

(b) The permittee shall maintain an inventory of spare parts including bags, cages, diaphragm and solenoid valves, etc.

(c) The permittee shall perform weekly inspections for compressed air system leakage and baghouse in-leakage.

(Ref.: Title V Operating Permit issued March 7, 2000)

5.B.12 For Emission Points AA-005 through AA-011, the permittee shall operate the pollution control equipment at all times while the facility is in operation. The permittee shall perform regular inspections and any required maintenance each week or more often if necessary to maintain proper operation of the pollution control equipment. The permittee shall also maintain on hand at all times sufficient equipment as is necessary to repair and/or replace the pollution control equipment. (Ref.: Permit to Construct issued March 11, 2011)

C. Specific Reporting Requirements

Emission Point(s)	Pollutant/Parameter Monitored	Reporting Requirement	Condition Number	Applicable Requirement
AA-001	Fuel usage	Semiannually	5.C.1	To ensure compliance with Permit Condition 5.B.1
	PM Opacity SO_2	Biennially	5.C.2	To ensure compliance with Permit Condition 5.B.7
AA-002 AA-003 AA-004 AA-005	PM Opacity	Biennially	5.C.2	To ensure compliance with Permit Condition 5.B.8

5.C.1 The permittee shall submit semiannual fuel usage reports. For each semiannual reporting period, the report shall provide the maximum amount of each fuel used, on a rolling 365-day basis, and the maximum sulfur content of any shipment received. When no shipment is received/combusted, the report shall indicate such. The permittee shall include in the semiannual reports any shipments of used oil received which did not meet the specifications and the disposition of these shipments. These reports shall be submitted in accordance with Permit Condition 5.A.4. (Ref.: Title V Operating Permit issued March 22, 2005)

5.C.2 The permittee shall submit stack test reports as required by Permit Conditions 5.B.7 and 5.B.8. (Ref.: Title V Operating Permit issued March 7, 2000)

D. Compliance Assurance Monitoring

5.D.1 The table below is the CAM plan for Emission Point AA-001:

	INDICATOR NO. 1	**INDICATOR NO. 2**
Indicator	Scrubber pressure drop	Scrubber water flow rate
Measurement Approach	Pressure differential across the scrubber is measured using a pressure drop gauge.	Scrubber water flow rate is measured using a flow meter.
Monitoring Methods and Location	Pressure differential across the scrubber will be continuously monitored.	Scrubber water flow rate will be continuously monitored.
Indicator Range	Pressure drop across the scrubber is greater than 4.1 inches of water. Pressure drop compliance values to be reassessed and adjusted if necessary at each subsequent permit-required stack test for particulate matter.	Water flow rate to the scrubber is between 124-186 gpm. Water flow compliance values to be reassessed and adjusted if necessary at each subsequent permit-required stack test for particulate matter.
Data Collection Frequency	Measure pressure drop across the scrubber once daily.	Measure water flow rate to the scrubber once daily.
Averaging Period	2 hours	2 hours
Recordkeeping	Pressure drop records and copies of all inspections and calibrations will be kept at the facility for a period of five (5) years.	Water flow rate records and copies of all inspections and calibrations will be kept at the facility for a period of five (5) years.
QA/QC	Monthly maintenance inspections and annual pressure drop gauge calibration.	Monthly maintenance inspections and annual flow meter calibration.

5.D.2 The table below is the CAM plan for Emission Points AA-002, AA-003, AA-004, and AA-005:

	INDICATOR NO. 1	**INDICATOR NO. 2**
Indicator	Baghouse pressure drop	Weekly visible emissions check
Measurement Approach	Pressure differential across the baghouses is measured using a pressure drop gauge.	Visible emissions will be evaluated on a weekly basis using EPA Reference Method 22. Any observed visible emissions will be evaluated by EPA Reference Method 9.
Monitoring Methods and Location	Pressure differential across the baghouses will be monitored across the inlets and outlets.	Observe visible emissions at outlets consistent with EPA Reference Method 22 and EPA Reference Method 9 observation position requirements.
Indicator Range	AA-002: Pressure drop = 3-8 inches of water. AA-003: Pressure drop = 3-8 inches of water. AA-004: Pressure drop = 3-8 inches of water. AA-005: Pressure drop = 3-8 inches of water.	AA-003 and AA-004: Visible emissions less than 7% opacity for each baghouse. AA-002 and AA-005: Visible emissions less than 40% opacity for each baghouse.
Data Collection Frequency	Measure pressure drop across the baghouses once daily.	Measure visible emissions from the baghouses once weekly.
Averaging Period	24 hours	In accordance with EPA Reference Method 9
Recordkeeping	Pressure drop records and copies of all inspections and calibrations will be kept at the facility for a period of five (5) years.	Copies of all visible emissions evaluations will be kept at the facility for a period of five (5) years.
QA/QC	Weekly maintenance inspections, quarterly internal inspections, and annual pressure drop gauge calibrations.	Biennial visible emissions evaluation certifications for EPA Reference Method 9 observers.

SECTION 6. ALTERNATIVE OPERATING SCENARIOS

6.1 None permitted.

SECTION 7. TITLE VI REQUIREMENTS

The following are applicable or potentially applicable requirements originating from Title VI of the Clean Air Act – Stratospheric Ozone Protection. The full text of the referenced regulations may be found on-line at **http://ecfr.gpoaccess.gov** under Title 40, or DEQ shall provide a copy upon request from the permittee.

7.1 If the permittee produces, transforms, destroys, imports or exports a controlled substance or imports or exports a controlled product, the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart A – Production and Consumption Controls.

7.2 If the permittee performs service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart B – Servicing of Motor Vehicle Air Conditioners.

7.3 The permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart E – The Labeling of Products Using Ozone-Depleting Substances, for the following containers and products:

(a) All containers in which a class I or class II substance is stored or transported;

(b) All products containing a class I substance; and

(c) All products directly manufactured with a process that uses a class I substance, unless otherwise exempted by this subpart or, unless EPA determines for a particular product that there are no substitute products or manufacturing processes for such product that do not rely on the use of a class I substance, that reduce overall risk to human health and the environment, and that are currently or potentially available. If the EPA makes such a determination for a particular product, then the requirements of this subpart are effective for such product no later than January 1, 2015.

7.4 If the permittee performs any of the following activities, the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart F – Recycling and Emissions Reduction:

(a) Servicing, maintaining, or repairing appliances;

(b) Disposing of appliances, including small appliances and motor vehicle air conditioners; or

(c) Refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturers of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons

selling class I or class II refrigerants or offering class I or class II refrigerants for sale, and persons purchasing class I or class II refrigerants.

7.5 The permittee shall be allowed to switch from any ozone-depleting substance to any acceptable alternative that is listed in the Significant New Alternatives Policy (SNAP) program promulgated pursuant to 40 CFR Part 82, Subpart G – Significant New Alternatives Policy Program. The permittee shall also comply with any use conditions for the acceptable alternative substance.

7.6 If the permittee performs any of the following activities, the permittee shall comply with the applicable requirements of 40 CFR Part 82, Subpart H – Halon Emissions Reduction:

(a) Any person testing, servicing, maintaining, repairing, or disposing of equipment that contains halons or using such equipment during technician training;

(b) Any person disposing of halons;

(c) Manufacturers of halon blends; or

(d) Organizations that employ technicians who service halon-containing equipment.

APPENDIX A

List of Abbreviations Used In this Permit

APC-S-1	Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants
APC-S-2	Permit Regulations for the Construction and/or Operation of Air Emissions Equipment
APC-S-3	Regulations for the Prevention of Air Pollution Emergency Episodes
APC-S-4	Ambient Air Quality Standards
APC-S-5	Regulations for the Prevention of Significant Deterioration of Air Quality
APC-S-6	Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act
APC-S-7	Acid Rain Program Permit Regulations for Purposes of Title IV of the Federal Clean Air Act
BACT	Best Available Control Technology
CEM	Continuous Emission Monitor
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COM	Continuous Opacity Monitor
COMS	Continuous Opacity Monitoring System
DEQ	Mississippi Department of Environmental Quality
EPA	United States Environmental Protection Agency
gr/dscf	Grains Per Dry Standard Cubic Foot
HP	Horsepower
HAP	Hazardous Air Pollutant
lbs/hr	Pounds per Hour
M or K	Thousand
MACT	Maximum Achievable Control Technology
MM	Million
MMBTUH	Million British Thermal Units per Hour
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards For Hazardous Air Pollutants, 40 CFR 61 or National Emission Standards For Hazardous Air Pollutants for Source Categories, 40 CFR 63
NMVOC	Non-Methane Volatile Organic Compounds
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards, 40 CFR 60
O&M	Operation and Maintenance
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 μm in diameter
ppm	Parts per Million
PSD	Prevention of Significant Deterioration, 40 CFR 52
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TPY	Tons per Year
TRS	Total Reduced Sulfur
VEE	Visible Emissions Evaluation
VHAP	Volatile Hazardous Air Pollutant
VOC	Volatile Organic Compound

APPENDIX B

40 CFR 60, Subpart OOO
Standards of Performance for Nonmetallic Mineral Processing Plants

APPENDIX C

40 CFR 60, Subpart UUU
Standards of Performance for Calciners and Dryers in Mineral Industries