STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT

TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Mississippi State University
Starkville, Mississippi
Oktibbeha County

has been granted permission to construct air emissions equipment to comply with the emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with 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.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

Krystal Rudolph

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: MAR 0 1 2019

Permit No.: 2060-00038

SECTION 1

A. GENERAL CONDITIONS

1. This permit is for air pollution control purposes only.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D.)

2. Any activities not identified in the application are not authorized by this permit.

   (Ref.: Miss. Code Ann. 49-17-29 1.b)

3. The knowing submittal of a permit application with false information may serve as the basis for the Permit Board to void the permit issued pursuant thereto or subject the applicant to penalties for operating without a valid permit pursuant to State Law.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(5).)

4. It is the responsibility of the applicant/permittee to obtain all other approvals, permits, clearances, easements, agreements, etc., which may be required including, but not limited to, all required local government zoning approvals or permits.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(6).)

5. The issuance of a permit does not release the permittee from liability for constructing or operating air emissions equipment in violation of any applicable statute, rule, or regulation of state or federal environmental authorities.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(7).)

6. 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 the permit, unless halting or reducing activity would create an imminent and substantial endangerment threatening the public health and safety of the lives and property of the people of this state.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(a).)

7. The permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. Sufficient cause for a permit to be reopened shall exist when an air emissions stationary source becomes subject to Title V. 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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(b).)

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

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(c).)

9. 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 permit or, for information claimed to be confidential, the permittee shall furnish such records to the DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(d).)

10. Design and Construction Requirements: The stationary source shall be designed and constructed so as to operate without causing a violation of an Applicable Rules and Regulations, without interfering with the attainment and maintenance of State and National Ambient Air Quality Standards, and such that the emission of air toxics does not result in an ambient concentration sufficient to adversely affect human health and well-being or unreasonably and adversely affect plant or animal life beyond the stationary source boundaries.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.A.)

11. Solids Removal: The necessary facilities shall be constructed so that solids removed in the course of control of air emissions may be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering State waters without the proper environmental permits.

    (Ref.: Miss. Code Ann. 49-17-29)

12. Diversion and Bypass of Air Pollution Controls: The air pollution control facilities shall be constructed such that diversion from or bypass of collection and control facilities is not needed except as provided for in 11 Miss. Admin. Code Pt. 2, R. 1.10., "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants."

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.10.)

13. Fugitive Dust Emissions from Construction Activities: The construction of the stationary source shall be performed in such a manner so as to reduce fugitive dust emissions from construction activities to a minimum.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.A(4).)

14. Right of Entry: The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their representatives upon presentation of credentials:

a) To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b) At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emissions.

(Ref.: Miss. Code Ann. 49-17-21)

15. Permit Modification or Revocation: After notice and opportunity for a hearing, the Permit Board may modify the permit or revoke it in whole or in part for good cause shown including, but not limited to:

a) Persistent violation of any of the terms or conditions of this permit;

b) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c) A change in federal, state, or local laws or regulations that require either a temporary or permanent reduction or elimination of previously authorized air emission.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.C.)

16. Public Record and Confidential Information: Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Environmental Quality, Office of Pollution Control.

(Ref.: Miss. Code Ann. 49-17-39)

17. Permit Transfer: This permit shall not be transferred except upon approval of the Permit Board.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.16.B)

18. Severability: The provisions of this permit are severable. If any provision of the permit, or the application of any provision of the 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. 11 Miss. Admin. Code Pt. 2, R. 2.1.D(7).)

19. Permit Expiration: The permit to construct will expire if construction does not begin within eighteen (18) months from the date of issuance or if construction is suspended for eighteen (18) months or more.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(1).)

20. Certification of Construction: A new stationary source issued a Permit to Construct cannot begin operation until certification of construction by the permittee.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(3).)

21. Beginning Operation: Except as prohibited in Section 1, Condition 24 of this permit, after certification of construction by the permittee, the Permit to Construct shall be deemed to satisfy the requirement for a permit to operate until the date the application for issuance or modification of the Title V Permit or the application for issuance or modification of the State Permit to Operate, whichever is applicable, is due. This provision is not applicable to a source excluded from the requirement for a permit to operate as provided by 11 Miss. Admin. Code Pt. 2, R. 2.13.G.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(4).)

22. Application for a Permit to Operate: Except as otherwise specified in Section 1, Condition 24 of this permit, the application for issuance or modification of the State Permit to Operate or the Title V Permit, whichever is applicable, is due twelve (12) months after beginning operation or such earlier date or time as specified in the Permit to Construct. The Permit Board may specify an earlier date or time for submittal of the application. Beginning operation will be assumed to occur upon certification of construction, unless the permittee specifies differently in writing.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(5).)

23. Operating Under a Permit to Construct: Except as otherwise specified in Section 1, Condition 24 of this permit, upon submittal of a timely and complete application for issuance or modification of a State Permit to Operate or a Title V Permit, whichever is applicable, the applicant may continue to operate under the terms and conditions of the Permit to Construct and in compliance with the submitted application until the Permit Board issues, modifies, or denies the Permit to Operate.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(6).)

24. Application Requirements for a Permit to Operate for Moderate Modifications: For moderate modifications that require contemporaneous enforceable emissions reductions from more than one emission point in order to “net” out of PSD/NSR, the applicable Title V Permit to Operate or State Permit to Operate must be modified prior to beginning operation of the modified facilities.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(7).)

25. General Duty: All air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

26. Deviation Reporting: 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) working days of the time the deviation began.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

27. Compliance Testing: Regarding compliance testing:

    a) The results of any emissions sampling and analysis shall be expressed both in units consistent with the standards set forth in any Applicable Rules and Regulations or this permit and in units of mass per time.

    b) Compliance testing will be performed at the expense of the permittee.

    c) Each emission sampling and analysis report shall include but not be limited to the following:

        (1) detailed description of testing procedures;

        (2) sample calculation(s);

        (3) results; and

        (4) comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.6.B(3), (4), and (6).)

B. GENERAL NOTIFICATION REQUIREMENTS

1. Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(2).)

2. The permittee must notify DEQ in writing when construction does not begin within eighteen (18) months of issuance or if construction is suspended for eighteen (18) months or more.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(3).)

3. Upon the completion of construction or installation of an approved stationary source or modification, and prior to commencing operation, the applicant shall notify the Permit Board

that construction or installation was performed in accordance with the approved plans and specifications on file with the Permit Board.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(1) and (3).)

4. The Permit Board shall be promptly notified in writing of any change in construction from the previously approved plans and specifications or permit. If the Permit Board determines the changes are substantial, it may require the submission of a new application to construct with "as built" plans and specifications. Notwithstanding any provision herein to the contrary, the acceptance of an "as built" application shall not constitute a waiver of the right to seek compliance penalties pursuant to State Law.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(2).)

SECTION 2
EMISSION POINT DESCRIPTION

The permittee is authorized to construct and operate, upon certification of construction, air emissions equipment, as described in the following table.

Emission Point	Description
AA-000	**Entire Facility**
AA-009	402 bhp (287 kw) Natural-Gas Fired Four Stroke Rich Burn Spark Ignition Reciprocating Internal Combustion Engine equipped with a Non Selective Catalytic Reduction (NSCR) Oxidation Catalyst

SECTION 3
EMISSION LIMITATIONS AND STANDARDS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limitation/Standard
AA-000	11 Miss. Admin. Code Pt. 2, R. 1.3.A.	3.1	Opacity	Facility-wide opacity limitations
	11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.2		
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.3	CO	249.0 tpy
		3.4	NO_X	
		3.5	HAP	9.0 tpy for any individual HAP 24.0 tpy for all combined HAPs
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.6	Natural Gas	Combust Natural Gas only
AA-009	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.7	PM/PM_{10} (*filterable only*)	0.6 lb/MMBTU per hour heat input
	40 CFR Part 63, Subpart ZZZZ (§63.6585(a & c) and 63.6590(c)(1)) 40 CFR Part 60, Subpart JJJJ (§60.4230(a)(4)(iii))	3.8	NO_X, CO, and VOC	Applicability Demonstration of compliance with Part 63, Subpart ZZZZ by compliance with the specified requirements of Part 60, Subpart JJJJ
	40 CFR Part 60, Subpart JJJJ (§60.4233(e), §60.4234, and Table 1 to Subpart JJJJ)	3.9		1.0 g/HP-hr NOx or 82 ppmvd at 15% O_2, 2.0 g/HP-hr CO or 270 ppmvd at 15% O_2, 0.7 g/HP-hr VOC or 60 ppmvd at 15% O_2

3.1 For the entire facility (Emission Point AA-000), 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. 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.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.A(1) and (2).)

3.2 For the entire facility (Emission Point AA-000), 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 Condition 3.1. This shall not apply to vision obscuration caused by uncombined water droplets.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.B.)

3.3 For the entire facility (Emission Point AA-000), the permittee shall limit the emissions of carbon monoxide (CO) to no more than 249.0 tons per year for each consecutive 12-month period on a rolling basis.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.4 For the entire facility (Emission Point AA-000), the permittee shall limit the emissions of nitrogen oxides (NO_X) to no more than 249.0 tons per year for each consecutive 12-month period on a rolling basis.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.5 For the entire facility (Emission Point AA-000), the permittee shall limit the emissions of any individual hazardous air pollutant (HAP) to no more than 9.0 tpy for each consecutive 12-month period on a rolling basis. The permittee shall limit the emissions of all combined HAPs to no more than 24.0 tpy for each consecutive 12-month period on a rolling basis.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.6 For Emission Point AA-009, the permittee shall combust pipeline quality natural gas only.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.7 For Emission Points AA-009, the permittee shall limit the particulate emissions from fossil fuel burning installations of less than 10 MMBTU/hr heat input to no more than 0.6 pounds per MMBTU per hour heat input.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).)

3.8 Emission Point AA-009 is a stationary reciprocating internal combustion engines (RICE) located at an area source of HAP emissions. As such, the engine is subject to and shall comply with all applicable requirements of 40 CFR Part 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

Emission Point AA-009 is a <500 HP stationary, natural gas-fired four stroke, rich burn (4SRB) spark ignition non-emergency RICE located at an area source of HAP emissions which was constructed after June 12, 2006. As such, the engine is considered to be a new stationary RICE and shall demonstrate compliance with the requirements of Subpart ZZZZ by complying with the applicable requirements of 40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.

(Ref.: 40 CFR 63.6585(a & c), 63.6590(c)(1), and 60.4230(a)(4)(iii))

3.9 For Emission Point AA-009, the permittee shall limit nitrogen oxides (NO_X) emissions to no more than 1.0 grams per horsepower-hour (g/HP-hr) or 82 parts per million by volume on a dry basis (ppmvd) at 15 percent O_2, carbon monoxide (CO) emissions to no more than 2.0 grams per horsepower-hour (g/HP-hr) or 270 parts per million by volume on a dry basis (ppmvd) at 15 percent O_2, and volatile organic compounds (excluding formaldehyde) (VOC) emissions to no more than 0.7 grams per horsepower-hour (g/HP-

hr) or 60 parts per million by volume on a dry basis (ppmvd) at 15 percent O_2. The permittee shall achieve these emissions standards for the entire life of the affected engine

(Ref.: 40 CFR 60.4233(e), 40 CFR 60.4234 and Table 1 to Subpart JJJJ)

SECTION 4
WORK PRACTICES

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Work Practice
AA-000	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	4.1	Facility-Wide Emissions	Operate all equipment as efficiently as possible

4.1 For the entire facility (AA-000), the permittee shall operate all equipment which generates, or has the potential to generate, air emissions as efficiently as possible in order to provide the maximum reduction of air pollution.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Monitoring/Recordkeeping Requirement
AA-000	11 Miss. Admin. Code Pt. 2, R. 2.9.	5.1	General Monitoring & Recordkeeping	Maintain records for a minimum of 5 years.
AA-009	40 CFR Part 60, Subpart JJJJ (§60.4243(b))	5.2	Exhaust Emissions	Demonstration of compliance with emission standards
	40 CFR Part 60, Subpart JJJJ (§60.4245(a))	5.3		Recordkeeping requirements

5.1 The permittee shall retain all required records, monitoring data, supporting information and reports 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 or other data for continuous monitoring instrumentation, and copies of all reports required by this permit. Copies of such records shall be submitted to MDEQ as required by Applicable Rules and Regulations or this permit upon request.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.9.)

5.2 For Emission Point AA-009, 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. The performance tests shall be completed in accordance with the applicable requirements of 40 CFR 60.4244.

(Ref.: 40 CFR 60.4243(b)(2)(i))

5.3 For Emission Point AA-009, the permittee shall maintain the records specified in paragraphs (a) through (d) below:

(a) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(b) Maintenance conducted on the engine.

(c) Documentation that the engine meets the emission standards through the compliance demonstration outlined in Condition 5.2.

(Ref.: 40 CFR 60.4245(a))

SECTION 6
REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
AA-000	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.1	Report permit deviations within five (5) working days.
		6.2	Submit certified annual monitoring report.
		6.3	All documents submitted to MDEQ shall be certified by a Responsible Official.
AA-009	40 CFR Part 60, Subpart JJJJ (§60.4245(c))	6.4	Notification requirements
	40 CFR Part 60, Subpart JJJJ (§60.4245(d))	6.5	Reporting requirements

6.1 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) working days of the time the deviation began.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

6.2 Except as otherwise specified herein, the permittee shall submit a certified annual report postmarked no later than 31st of January for the preceding calendar year. This report shall address any required monitoring specified in the permit. All instances of deviations from permit requirements must be clearly identified in the report. Where no monitoring data is required to be reported and/or there are no deviations to report, the report shall contain the appropriate negative declaration.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

6.3 Any document required by this permit to be submitted to the MDEQ shall contain a certification signed by a responsible official stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)

6.4 For Emission Point AA-009, the permittee shall submit an initial notification as required by 40 CFR 60.7(a)(1). The notification must include the information in paragraphs (a) through (e) below:

(a) Name and address of the owner or operator;

(b) The address of the affected source;

(c) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(d) Emission control equipment; and

(e) Fuel used.

(Ref.: 40 CFR 60.4245(c))

6.5 For Emission Point AA-009, the permittee shall submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference—see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.

The permittee shall submit a test protocol at least thirty (30) days prior to the scheduled test date to ensure that all test methods and procedures are acceptable to the DEQ. The DEQ must be notified at least ten (10) days prior to the scheduled test date so that an observer may be scheduled to witness the test(s)

(Ref.: 40 CFR 60.4245(d) and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).)