STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT

TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Goodrich Petroleum Company LLC, CMR 8-5H Number 1 Production Facility
County Farm Road AD
Liberty, Mississippi
Amite 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

_____

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: ___March 12, 2014____ **Permit No.: 0080-00039**

Modified: _____

Draft/Proposed

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:

3.1 detailed description of testing procedures;

3.2 sample calculation(s);

3.3 results; and

3.4 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	Equipment ID	Description
AA-001	5-13-F	Flare (0.88 MMTBU/hr, field natural gas-fired)
AA-002	17-13-LL	Oil Truck Loading
AA-003	30-16-ICE-ES	99 hp field natural gas-fired Compressor Engine equipped with catalytic converter
AA-004	3-13-ICE ES	11.7 hp gasoline-fired Circulating Pump Engine
AA-005	1-13-HT-BS	Heater-Treater Burner Stack (0.5 MMBTU/hr, field natural gas-fired)
AA-006	20-13-CST	135 gallon Organic Chemical Blend Storage Tank
AA-010	18-13-PC	Pneumatic Controllers
AA-011	4a-13-OST-CV	400 bbl (16,800 gallon) Oil Storage Tank with emissions routed to control flare (AA-001)
AA-012	4b-13-OST-CV	400 bbl (16,800 gallon) Oil Storage Tank with emissions routed to control flare (AA-001)
AA-015	4e-13-WST-CV	400 bbl (16,800 gallon) Produced Water Storage Tank with emissions routed to control flare (AA-001)
AA-016	4f-13-WST-CV	400 bbl (16,800 gallon) Produced Water Storage Tank with emissions routed to control flare (AA-001)
AA-017	9-13-BV	Blowcase Vessel (Pump Skid Fluids)
AA-018	10-13-BV	Blowcase Vessel (Flare Liquids)
AA-019	11-13-BV	Blowcase Vessel (Drip Pot)
AA-021	19-13-FE	Fugitive Emissions
AA-022	24-14-CST	135 gallon Organic Chemical Blend Storage Tank
AA-023	28-16-CST	115 gallon Organic Chemical Blend Storage Tank
AA-024	29-16-CST	235 gallon Organic Chemical Blend Storage Tank
AA-025	6-13-FG	Well Gas-Relief Vent with emissions routed to control flare (AA-001)

SECTION 3
EMISSION LIMITATIONS AND STANDARDS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limitation/Standard
Facility Wide	11 Miss. Admin. Code Pt. 2, R. 1.3.A.	3.1	Opacity	≤ 40%
	11 Miss. Admin. Code Pt. 2, R. 1.3.B	3.2	Equivalent Opacity	
	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.3	PM/PM_{10} (filterable only)	≤ 0.6 lbs/MMBTU
	11 Miss. Admin. Code Pt. 2, R. 1.4.B(2).	3.4	H_2S	≤ One (1) grain per 100 standard cubic feet
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.5	Produced Gas	Route produced gas to flare
AA-003 AA-004	40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) 40 CFR 63.6585 and 63.6665, Subpart ZZZZ	3.6		Applicability
	40 CFR 63.6590(c), Subpart ZZZZ	3.7		Demonstration of compliance by compliance with the applicable requirements of 40 CFR 60, Subpart JJJJ
	40 CFR 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) 40 CFR 60.4230(a)(4) and 60.4246, Subpart JJJJ	3.8		Applicability
	40 CFR 60.4233 and 60.4234, Subpart JJJJ	3.9	Exhaust	Emission Standards
AA-004	40 CFR 60.4235, Subpart JJJJ, and 40 CFR 60.4234	3.10	Fuel	≤ 80 ppm sulfur

3.1 For the entire facility, 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.)

3.2 For the entire facility, 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, the permittee shall limit the particulate emissions from fossil fuel burning installations of less than 10 million BTU per hour (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).)

3.4 For the entire facility, the permittee shall not permit the emission of any gas stream which contains hydrogen sulfide (H_2S) in excess of one grain per 100 standard cubic feet. Gas streams containing hydrogen sulfide in excess of one grain per 100 standard cubic feet shall be incinerated in the control flare (AA-001) at temperatures of no less than 1600 °F for a period of no less than 0.5 seconds or processed in such a manner which is equivalent to or more effective for the removal of hydrogen sulfide.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.B(2).)

3.5 For the entire facility, in order to minimize the emissions of air pollutants, the permittee shall route all produced gas emissions to the process flare (AA-001). Emission Point AA-001 is required to be operational as long as it is safe and practical for the flare to be in operation without the use of supplemental fuels. If the amount of produced gas reaches a level where operation of Emission Point AA-001 is no longer safe or practical then those emissions may be vented to the atmosphere.

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

3.6 For Emission Points AA-003 and AA-004, the permittee is subject to and shall comply with the applicable requirements of the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) and the General Provisions (40 CFR 63, Subpart A) as outlined in Table 8 to Subpart ZZZZ.

(Ref.: 40 CFR 63.6585 and 63.6665, Subpart ZZZZ)

3.7 For Emission Points AA-003 and AA-004, the permittee shall meet the requirements of 40 CFR 63, Subpart ZZZZ, by meeting the requirements of 40 CFR 60, Subpart JJJJ. No further requirements apply to these units.

(Ref.: 40 CFR 63.6590(c), Subpart ZZZZ)

3.8 For Emission Points AA-003 and AA-004, the permittee is subject to and shall comply with the applicable requirements of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) and the General Provisions (40 CFR 60, Subpart A) as outlined in Table 3 to Subpart JJJJ.

(Ref.: 40 CFR 60.4230(a)(4) and 60.4246, Subpart JJJJ)

3.9 For Emission Points AA-003 and AA-004, the permittee shall meet the emissions standards outlined in 40 CFR 60.4233, Subpart JJJJ, as applicable. The permittee shall operate and maintain the affected engines such that it achieves these emission standards for the life of the affected engine.

(Ref.: 40 CFR 60.4233 and 60.4234, Subpart JJJJ)

3.10 For Emission Points AA-004, the permittee only combust gasoline which contains no more than 80 parts per million (ppm) sulfur.

(Ref.: 40 CFR 60.4235, Subpart JJJJ, and 40 CFR 80.195)

SECTION 4
WORK PRACTICES

This section was intentionally left blank since no work practice standards apply to this permit action.

SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Monitoring/Recordkeeping Requirement
AA-003 AA-004	40 CFR 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) 40 CFR 60.4245(a), Subpart JJJJ	5.1		Recordkeeping
AA-003	40 CFR 60.4243(b)(2)(i), Subpart JJJJ	5.2	Exhaust	Demonstration of Compliance
AA-004	40 CFR 60.4243(a)(1) and (a)(2)(i), Subpart JJJJ	5.3		

5.1 For Emission Points AA-003 and AA-004, the permittee shall maintain the records outlined 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 engines.

(c) If the engines are certified engines, documentation from the manufacturer that the engines are certified to meet the emission standards and information as required in 40 CFR 90, 1048, 1054, and 1060, as applicable.

(d) If the engines are not certified engines or are certified engines operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), Subpart JJJJ, documentation that the engines meet the emission standards.

(Ref.: 40 CFR 60.4245(a), Subpart JJJJ)

5.2 For Emission Point AA-003, the permittee shall demonstrate compliance with the emission standards specified in Condition 3.9, as well as the applicable requirements of 40 CFR 60.4243. The permittee shall also keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(Ref.: 40 CFR 60.4243(b)(2)(i), Subpart JJJJ)

5.3 For Emission Point AA-004, the permittee shall demonstrate compliance with the emission standards specified in 40 CFR 60.4233(a) by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) for the same engine class and maximum engine power. Furthermore, the permittee shall demonstrate compliance by meeting the requirements of either paragraph (a) or (b) below:

(a) If the certified engine is operated and maintained according to the manufacturer's emission related instructions, then the permittee shall keep records of all conducted maintenance. The permittee shall also meet the requirements of 40 CFR Part 1068, Subparts A through D, as applicable. Any adjustments made to

the engine's settings which are in accordance with the manufacturer's instructions shall not cause the engine to be considered out of compliance.

(b) If the certified engine is not operated and maintained according to the manufacturer's emission related instructions, then the engine shall not be considered a "certified engine". In this circumstance, the permittee shall keep a maintenance plan and records of conducted maintenance to demonstrate compliance. The permittee shall also maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions; however, no performance testing is required.

(Ref.: 40 CFR 60.4243(a)(1) and (a)(2)(i), Subpart JJJJ)

SECTION 6
REPORTING REQUIREMENTS

This section was intentionally left blank.