



State of Mississippi



AIR POLLUTION CONTROL PERMIT

Permit To Construct Air Emissions Equipment

THIS CERTIFIES

Encana Oil and Gas USA Inc, Joe Jackson 4H-2 Production Facility
Highway 24 and Lower Liberty Gloster Road
Liberty, MS
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

Mississippi Department of Environmental Quality

Issued/Modified: JUL 19 2012

Expires:

Permit No. 0080-00028

Agency Interest # 57079

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Permit To Construct Air Emissions Equipment

Encana Oil and Gas USA Inc, Joe Jackson 4H-2 Production Facility

Subject Item Inventory

Permit Number:0080-00028

Activity ID No.: PER20120001

Subject Item Inventory:

ID	Designation	Description
AI57079	57079	Oil & Gas Production
EQPT1	AA-001	Low Pressure Flare (FL-701)
EQPT2	AA-002	0.35 MMBTU/hr Heater Treater (V-103)
EQPT3	AA-003	12,600 Gallon Crude Oil/Condensate Storage Tank (S-501) with emissions controlled by the flare (AA-001)
EQPT4	AA-004	12,600 Gallon Crude Oil/Condensate Storage Tank (S-502) with emissions controlled by the flare (AA-001)
EQPT5	AA-005	12,600 Gallon Oil/Condensate/Produced Water Storage Tanks (S-503) with emissions controlled by the flare (AA-001)
EQPT6	AA-006	12,600 Gallon Produced Water Storage Tank (S-504)
AREA1	AA-007	Fugitive Emissions
ACT1	AA-008	Crude Oil Loading (OilLL)
ACT2	AA-009	Produced Water Loading (PWLL)
EQPT7	AA-010	Two Phase Separator

Subject Item Groups:

ID	Description	Components
GRPT1	Oil Storage Tanks	EQPT3 12,600 Gallon Crude Oil/Condensate Storage Tank (S-501) with emissions controlled by the flare (AA-001)
		EQPT4 12,600 Gallon Crude Oil/Condensate Storage Tank (S-502) with emissions controlled by the flare (AA-001)
		EQPT5 12,600 Gallon Oil/Condensate/Produced Water Storage Tanks (S-503) with emissions controlled by the flare (AA-001)

KEY

ACT = Activity

AREA = Area

AI = Agency Interest

CAFO = Concentrated Animal Feeding Operation

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KEY

CONT = Control Device

IA = Insignificant Activity

RPNT = Release Point

EQPT = Equipment

MAFO = Animal Feeding Operation

TRMT = Treatment

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AI0000057079 (57079) Oil & Gas Production:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Fuel Combusted	Fuel Combusted: For all combustion units operating at this facility, the permittee shall combust only commercial grade propane or produced natural gas. [APC-S-2 II.B(10)]

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1		The permittee shall conduct a semi-annual natural gas analysis including hydrogen sulfide concentration, sulfur content, methane concentration (volume), gross heating value, molecular weight and specific gravity. [APC-S-2 II.B(11)]

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AI0000057079 (continued):

Record-Keeping Requirements:

Condition No.	Condition
R-1	<p>For the facility, the permittee shall keep the following records:</p> <ul style="list-style-type: none">(1) Record the tons/year of volatile organic compounds, total hazardous air pollutants and individual hazardous air pollutants in 12-month consecutive months.(2) Results of semi-annual analysis conducted on produced natural gas including hydrogen sulfide, sulfur content, methane concentration (volume), gross heating value, molecular weight and specific gravity;(3) calculated cubic feet of natural gas burned, as fuel monthly;(4) barrels of oil produced, monthly;(5) calculated cubic feet of natural gas produced, monthly;(6) cubic feet of natural gas destructed in the flare unit, monthly;(7) log/record of monthly visible emission observation on the flare and heater treater. <p>The permittee shall maintain a copy of this record on site for at least five years and shall make them available upon request by the Mississippi Department of Environmental Quality (MDEQ) personnel. [APC-S-2 II.B(11)]</p>

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AI0000057079 (continued):

Submittal/Action Requirements:

Condition No.	Condition
S-1	General Condition: The permittee shall submit certification of construction: Due within thirty (30) days of completion of construction or installation of an approved stationary source or prior to startup, whichever is earlier. The notification shall certify that construction or installation was performed in accordance with the approved plans and specifications. In the event there is any change in construction from the previously approved plans and specifications or permit, the permittee shall promptly notify MDEQ in writing. If MDEQ determines the changes are substantial, MDEQ 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. [APC-S-2 V.D]
S-2	Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun. [APC-S-2 V.C(2)]
S-3	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. [APC-S-2 V.C(3)]
S-4	Except as otherwise specified herein, the permittee shall submit a certified annual report, due by the 31st of January for the preceding calendar year. This report shall address the required monitoring specified in the permit including the following: (1) the quantity of VOC, individual HAPs and total HAPs in 12 consecutive months; (2) results of semi- annual analysis of natural gas produced including methane concentration (by volume), hydrogen sulfide, sulfur content, gross heating value, molecular weight, and specific gravity; (3) calculated cubic feet of natural gas burned, as fuel, monthly; (4) barrels of oil produced, monthly; (5) cubic feet of natural gas produced, monthly; and, (6) cubic feet of natural gas destructed in the flare, monthly. [APC-S-2 II.B(11)]

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AI0000057079 (continued):

Narrative Requirements:

General Condition:

Condition No.	Condition
T-1	General Condition: The stationary source shall be designed and constructed so as to operate without causing a violation of any Applicable Rules and Regulations or this permit, 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. [APC-S-2 V.A]
T-2	General Condition: Any activities not identified in the application are not authorized by this permit. [Miss. Code Ann. 49_17_29 1.b]
T-3	General Condition: 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. [Miss. Code Ann. 49_17_29]
T-4	General Condition: 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 Regulation APC-S-1, "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants", Section 10. [APC-S-1 10]
T-5	General Condition: The permittee shall allow the Mississippi Environmental Quality Commission, the Mississippi Environmental Quality Permit Board, MDEQ staff and/or their authorized representatives, upon the 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 emission. [Miss. Code Ann. 49_17_21]
T-6	General Condition: After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for good cause shown including, but not limited to, the following: a. Persistent violation of any 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 any condition that requires either a temporary or permanent reduction or elimination of previously authorized air emissions. [APC-S-2 II.C]
T-7	General Condition: 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. [Miss. Code Ann. 49_17_39]

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AI0000057079 (continued):

Narrative Requirements:

Condition No.	Condition
T-8	General Condition: This permit is for air pollution control purposes only. [APC-S-2 I.D]
T-9	General Condition: 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. [APC-S-2 II.B(5)]
T-10	General Condition: 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. [APC-S-2 I.D(6)]
T-11	General Condition: 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. [APC-S-2 II.B(7)]
T-12	General Condition: 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. [APC-S-2 II.B(15)a]
T-13	General Condition: 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. [APC-S-2 II.B(15)b]
T-14	General Condition: The permit does not convey any property rights of any sort, or any exclusive privilege. [APC-S-2 II.B(15)c]
T-15	General Condition: 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. [APC-S-2 II.B(15)d]
T-16	General Condition: This permit shall not be transferred except upon approval of the Permit Board. [APC-S-2 XVI.B]

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AI0000057079 (continued):

Narrative Requirements:

Condition No.	Condition
T-17	General Condition: 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. [APC-S-2 I.D(7)]
T-18	General Condition: 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. [APC-S-2 V.C(1)]
T-19	General Condition: A new stationary source issued a Permit to Construct cannot begin operation until certification of construction by the permittee. [APC-S-2 V.D(3)]
T-20	General Condition: Except as prohibited in APC-S-2, Section V.D.7, 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 APC-S-2, Section XIII.G. [APC-S-2 V.D(4)]
T-21	General Condition: Except as otherwise specified in APC-S-2, Section V.D.7, 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. [APC-S-2 V.D(5)]
T-22	General Condition: Except as otherwise specified in APC-S-2, Section V.D.7, 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. [APC-S-2 V.D(6)]
T-23	General Condition: 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. [APC-S-2 V.D(7)]

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AI0000057079 (continued):

Narrative Requirements:

Condition No.	Condition
T-24	<p>General Condition: Regarding compliance testing:</p> <p>(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.</p> <p>(b) Compliance testing will be performed at the expense of the permittee.</p> <p>(c) Each emission sampling and analysis report shall include but not be limited to the following:</p> <ol style="list-style-type: none">1. detailed description of testing procedures;2. sample calculation(s);3. results; and4. comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit. [APC-S-2 VI.B(3, 4 and 6)]
T-25	<p>General Condition: 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. [APC-S-2 V.A(4)]</p>

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EQPT0000000001 (AA-001) Low Pressure Flare (FL-701):

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Hydrogen sulfide	Hydrogen sulfide: The permittee shall not permit the emission of any gas stream which contains hydrogen sulfide in excess of one grain per 100 standard cubic feet. [APC-S-1 4.2.b]
L-2	Opacity	Opacity: The permittee shall operate the flare with no visible emissions as determined by EPA Method 22, except for periods not to exceed a total of 5 minutes during any consecutive two (2) hours. [APC-S-2 II.B(10)]
L-3		The permittee shall operate the flare in accordance with 40 CFR 60.18. [APC-S-2 II.B(10)]
L-4		The permittee shall maintain a flare pilot flame at all times. The flare shall operate with a control efficiency of 98%. The permittee shall record anytime the facility is operated without a flame present and the corrective actions taken. [APC-S-2 II.B(10)]
L-5		The flare will be operated such that visible emissions will not exceed 5 minutes in any consecutive 2 hour period. [40 CFR 60.18(c)(1)]
L-6		The flare will combust gas with a net heating value greater than 200 Btu/scf as required for a nonassisted flare. [40 CFR 60.18(c)(3)]
L-7		The flare will comply with all applicable velocity requirements. [40 CFR 60.18(c)(4)]
L-8		The flare utilized will be a nonassisted flare. [40 CFR 60.18(c)(6)]
L-9		The flare will be monitored to ensure that it is operated and maintained in accordance with the design. [40 CFR 60.18(d)]
L-10		The facility flare will be operational at all times while product is present in Tanks S-501, S-502 and S-503. [40 CFR 60.18(e)]

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EQPT0000000001 (continued):

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1		The permittee shall perform monthly visual emission observations using EPA Method 22. If smoking is detected, the permittee shall take corrective action. [APC-S-2 II.B(11)]

Record-Keeping Requirements:

Condition No.	Condition
R-1	The permittee shall maintain a record and/or a log documenting all visual observations/test, the nature and cause of any visible emissions, any corrective action(s) taken to prevent or minimize the emissions, and the date and time when visible observations were conducted. [APC-S-2 II.B(11)]
R-2	The permittee shall keep records of all maintenance performed on the flare in order to operate in a manner consistent with good air pollution control practices to minimize emissions and shall make said records available upon request during an inspection visit by the MDEQ personnel. [APC-S-2 II.B(11)]

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EQPT0000000002 (AA-002) 0.35 MMBTU/hr Heater Treater (V-103):

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Particulate Matter	Particulate Matter: The permittee shall have particulate emissions from fossil fuel burning installations of less than 10 MMBTU/hr heat input that exceeds 0.6 lb/MMBTU. [APC-S-1 3.4.a(1)]
L-2	Opacity	Opacity: The permittee shall not have emissions of opacity greater than or equal to 40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A. [APC-S-1 4.1.a]
L-3		The permittee shall route the separated gas emissions to the flare (AA-001) or to a pipeline for product recovery. [APC-S-2 II.B(10)]

Narrative Requirements:

Condition No.	Condition
T-1	Such air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

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Facility Requirements

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EQPT0000000006 (AA-006) 12,600 Gallon Produced Water Storage Tank (S-504):

Narrative Requirements:

Condition No.	Condition
T-1	Such air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

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AREA0000000001 (AA-007) Fugitive Emissions:

Narrative Requirements:

Condition

No. Condition

T-1 Such air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

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ACT0000000001 (AA-008) Crude Oil Loading (OilLL):

Narrative Requirements:

Condition No.	Condition
T-1	Such air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

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ACT0000000002 (AA-009) Produced Water Loading (PWLL):

Narrative Requirements:

Condition

No. Condition

T-1 Such air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

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EQPT0000000007 (AA-010) Two Phase Separator:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1		The permittee shall only operate emission point AA-010, the separator, with the separated gas routed to and controlled by the flare (AA-001). [APC-S-2 II.B(10)]

Narrative Requirements:

Condition No.	Condition
T-1	Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

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GRPT0000000001 (Group 1) Oil Storage Tanks:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1		The permittee shall route emissions to the flare (AA-001) or to a pipeline for product recovery. [APC-S-2 II.B(10)]
L-2		For Emission Points AA-003 and AA-004, the permittee is subject to New Source Performance Standard for Crude Oil and Natural Gas Production, Transmission, and Distribution, 40 CFR 60, Subpart OOOO and the General Provisions in Subpart A. The permittee shall comply with all applicable requirements by the published compliance date. [40 CFR 60.Subpart OOOO]

Narrative Requirements:

Condition No.	Condition
T-1	Such air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants. [APC-S-2 II.B(10)]

GENERAL INFORMATION

Encana Oil and Gas USA Inc, Joe Jackson 4H-2 Production Facility
Highway 24 and Lower Liberty Gloster Road
Liberty, MS
Amite County

Alternate/Historic Identifiers

ID	Alternate/Historic Name	User Group	Start Date	End Date
57079	Encana Oil and Gas (USA), Inc.	Official Site Name	2/16/2012	
2800500028	Encana Oil and Gas (USA), Inc.	Air-AIRS AFS	7/18/2012	
008000028	Encana Oil and Gas USA Inc, Joe Jackson 4H-2 Production Facility	Air-Construction	7/19/2012	

Basin: South Independent Streams Basin

Location Description: