STATE OF MISSISSIPPI
AND FEDERALLY ENFORCEABLE
AIR POLLUTION CONTROL
PERMIT

TO OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

THIS CERTIFIES THAT

Denbury Onshore LLC, Mallalieu EOR Facility
1043 Mount Olive Road
Bogue Chitto, Mississippi
Lincoln 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 the Federal Clean Air Act and the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), the regulations and standards adopted and promulgated thereunder, and the State Implementation Plan for operating permits for synthetic minor sources.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

Krystal Rudolph

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: April 20, 2020 **Permit No.: 1620-00038**

Effective Date: As specified herein.

Expires: March 31, 2025

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. This permit is a Federally-approved permit to operate a synthetic minor source as described in 11 Miss. Admin. Code Pt. 2, R. 2.4.D.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.4.D.)

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

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

4. 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 constructing or operating without a valid permit.

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

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 this 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 issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

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

8. The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board 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.

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

9. 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)

10. 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.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(7).)

11. This permit does not authorize a modification as defined in Regulation 11 Miss. Admin. Code Pt. 2, Ch.2., "Permit Regulations for the Construction and/or Operation of Air Emission Equipment." A modification may require a Permit to Construct and a modification of this permit. Modification is defined as "Any 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 Part 51, Subpart I, or 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 Part 51, Subpart I, or 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 Part 51, Subpart I or 40 CFR 51.166; or

f. Any change in ownership of the stationary source.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.C(15).)

B. GENERAL OPERATIONAL CONDITIONS

1. 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, 11 Miss. Admin. Code Pt. 2, "Regulations for the Prevention of Air Pollution Emergency Episodes" for the level of emergency declared.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.10.)

2. Any diversion from or bypass of collection and control facilities is prohibited, 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.)

3. Solids removed in the course of control of air emissions shall 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 1.a(i and ii))

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

a. Upsets

(1) For an upset defined in 11 Miss. Admin. Code Pt. 2, R. 1.2., the Commission may pursue an enforcement action for noncompliance with an emission standard or other requirement of an applicable rule, regulation, or permit. In determining whether to pursue enforcement action, and/or the appropriate enforcement action to take, the Commission may consider whether the source has demonstrated through properly signed contemporaneous operating logs or other relevant evidence the following:

(i) An upset occurred and that the source can identify the cause(s) of the upset;

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

(iii) During the upset the source took all reasonable steps to minimize levels of emissions that exceeded the emission standard or other requirement of an applicable rule, regulation, or permit;

(iv) That within 5 working days of the time the upset began, the source submitted a written report to the Department describing the upset, the steps taken to mitigate excess emissions or any other noncompliance, and the corrective actions taken and;

(v) That as soon as practicable but no later than 24 hours of becoming aware of an upset that caused an immediate adverse impact to human health or the environment beyond the source boundary or caused a general nuisance to the public, the source provided notification to the Department.

(2) In any enforcement proceeding by the Commission, the source 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.

(4) These upset provisions apply only to enforcement actions by the Commission and are not intended to prohibit EPA or third party enforcement actions.

b. Startups and Shutdowns (as defined by 11 Miss. Admin. Code Pt. 2, R. 1.2.)

(1) Startups and shutdowns are part of normal source operation. Emission limitations apply during startups and shutdowns unless source specific emission limitations or work practice standards for startups and shutdowns are defined by an applicable rule, regulation, or permit.

(2) Where the source is unable to comply with existing emission limitations

established under the State Implementation Plan (SIP) and defined in this regulation, 11 Mississippi Administrative Code, Part 2, Chapter 1, the Department will consider establishing source specific emission limitations or work practice standards for startups and shutdowns. Source specific emission limitations or work practice standards established for startups and shutdowns are subject to the requirements prescribed in 11 Miss. Admin. Code Pt. 2, R. 1.10.B(2)(a) through (e).

(3) Where an upset as defined in Rule 1.2 occurs during startup or shutdown, see the upset requirements above.

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

5. 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).)

C. PERMIT RENEWAL / MODIFICATION / TRANSFER / TERMINATION

1. For renewal of this permit, the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Environmental Quality Permit Board. If the applicant submits a timely and complete application pursuant to this paragraph and the Permit Board, through no fault of the applicant, fails to act on the application on or before the expiration date of the existing permit, the applicant shall continue to operate the stationary source under the terms and conditions of the expired permit, which shall remain in effect until final action on the application is taken by the Permit Board. Permit expiration terminates the

source's ability to operate unless a timely and complete renewal application has been submitted.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.8.)

2. 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).)

3. 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).)

4. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:

   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 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.)

5. This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.

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

SECTION 2
EMISSION POINT DESCRIPTION

The permittee is authorized to operate air emissions equipment, as described in the following table.

Emission Point	Facility Reference No.	Equipment ID	Description
AA-101	44-15-LP-RG	--	Low Pressure Relief Gas vented to the atmosphere when the Vapor Recovery Unit (VRU) is down
AA-105a	2-05-LH-BS	V-105A	3.8 MMBtu/hr natural gas-fired heater treater
AA-105b	2B-13-HT-BS	V-105B	3.8 MMBtu/hr natural gas-fired heater treater
AA-106	3-05-LH-BS	H-106	9 MMBtu/hr natural gas-fired heater treater
AA-107	4-05-SBP	SP-120	Sand blowdown pit
AA-118	5-05-OST-V	V-118A	3,000-barrel (126,000-gallon) vertical, fixed roof wet oil tank vented to the Control Flare (AA-140)
AA-119a	6-05-OST-V	V-119A	3,000-barrel (126,000-gallon) vertical, fixed roof wet/dry oil tank vented to the Control Flare (AA-140)
AA-119b	7-05-OST-V	V-119B	5,000-barrel (210,000-gallon) vertical, fixed roof dry oil tank vented to the Control Flare (AA-140)
AA-120a	8a-05-GBT-CV	V-120A	1,500-barrel (63,000-gallon) vertical, fixed roof oil/water skim tank; may be vented to the Control Flare (AA-140) though not required
AA-120b	8b-05-GBT-CV	V-120B	1,500-barrel (63,000-gallon) vertical, fixed roof oil/water skim tank; may be vented to the Control Flare (AA-140) though not required
AA-129a	9a-05-WST-CV	V-129A	2,000-barrel (84,000-gallon) vertical, fixed roof produced water tank
AA-129b	9b-05-WST-CV	V-129B	2,000-barrel (84,000-gallon) vertical, fixed roof produced water tank
AA-129c	9c-05-WST-CV	V-129C	4,500-barrel (189,000-gallon) vertical, fixed roof produced water tank
AA-132	10-05-SOT-V	V-132	300-barrel (12,600-gallon) vertical, fixed roof slop oil tank
AA-133a	11-05-IOT-V	V-133A	1,000-barrel (42,000-gallon) vertical, fixed roof produced oil with inhibitors storage tank
AA-133b	12-05-IOT-V	V-133B	1,000-barrel (42,000-gallon) vertical, fixed roof produced oil with inhibitors storage tank
AA-134	13-05-ST	V-134	152-barrel (6,384-gallon) Corrosion Chemical Storage Tank-Vent
AA-135	14-05-SEP-V	--	47,872-gallon API oil/water separator
AA-136	15-05-WST-CV	V-152	3,000-barrel (126,000-gallon) vertical, fixed roof salt water storage tank
AA-137	16-05-ST-V	V-154A	16,075-gallon vertical, fixed roof API separator tank

Emission Point	Facility Reference No.	Equipment ID	Description
AA-138	17-05-ST-V	V-154B	16,075-gallon vertical, fixed roof API separator tank
AA-139	18-05-FE	--	Facility-wide fugitive emissions
AA-140	19-05-F	--	Flare controlling emissions from Emission Points AA-118, AA-119a, AA-119b, and AA-147
AA-142	21-05-CB	--	High-pressure compressor blowdowns
AA-144	23-05-CB	--	Low-pressure compressor blowdowns
AA-147	29-09-OST-CV	V-119C	5,000-barrel (210,000-gallon) vertical, fixed roof dry oil tank vented to the Control Flare (AA-140)
AA-148	30-09-IOT-CV	V-133C	1,500-barrel (63,000-gallon) vertical, fixed roof produced oil with inhibitors storage tank
AA-149	31-09-I	V-151	14.2 MMBtu/hr Incinerator (V-151) controlling emissions from low-pressure relief gas during emergencies or when the VRU is down
AA-150	32-13-LH-BS	H-108	3.5 MMBtu/hr natural gas-fired line heater
AA-151	33-13-HT-BS	V-118	0.5 MMBtu/hr natural gas-fired heater treater
AA-152	34a-13-LH-BS	H-104A	30 MMBtu/hr natural gas-fired line heater
AA-153	34b-13-LH-BS	H-104B	30 MMBtu/hr natural gas-fired line heater
AA-154	35a-13-WST-CV	V-154A	400-barrel (16,800-gallon) vertical, fixed roof produced water storage tank
AA-155	35b-13-WST-CV	V-154B	400-barrel (16,800-gallon) vertical, fixed roof produced water storage tank
AA-156	43-14-GST	--	1,000-gallon horizontal, fixed roof gasoline storage tank
AA-157	36-13-GST	V-136	100-barrel (4,200-gallon) horizontal, fixed roof glycol storage tank
AA-158	37-13-CST	--	Ten (10) horizontal, fixed roof organic chemical blend storage tanks (each ≤ 550-gallons)
AA-159	38-13-CST	--	2,000-gallon horizontal, fixed roof organic chemical blend storage tank
AA-160	39-13-CST	--	Five (5) horizontal, fixed roof organic chemical storage tanks (each ≤ 800-gallons)
AA-161	42-14-DST	--	1,000-gallon horizontal, fixed roof diesel storage tank

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. 2.2.B(10).	3.1	VOC	95.0 tpy
			Total HAP	24.0 tpy
			Individual HAP	9.5 tpy
	11 Miss. Admin. Code Pt. 2, R. 1.3.A.	3.2	Opacity	40%
	11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.3	Opacity	Equivalent Opacity
	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.	3.5	Fuel	Combust only produced gas, propane, natural gas, or diesel
		3.6	All Pollutants	Minimizing Pollutants
AA-149 AA-152 AA-153	11 Miss Admin. Code Pt. 2, R. 1.3.D(1)(b).	3.7	PM (filterable only)	$E=0.8808*I^{-0.1667}$
AA-105a AA-105b AA-106 AA-140 AA-150 AA-151	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.8	PM (filterable only)	0.6 lbs per MMBtu
AA-105a AA-105b AA-106 AA-150 AA-151 AA-152 AA-153	11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).	3.9	SO_2	4.8 lb per MMBtu
AA-118 AA-119a AA-119b AA-147	Permit to Construct a Moderate Stationary Source issued December 18, 2008, and modified via the Title V Operating Permit issued September 11, 2017	3.10	Operating Restriction	Emissions shall be vented to the flare
AA-140	Permit to Construct a Moderate Stationary Source issued December 18, 2008, 40 CFR 63.11(b)(4)-(5), and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)	3.11	Operating Restrictions	Flare requirements

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limitation/Standard
AA-101	Permit to Construct a Moderate Stationary Source issued December 18, 2008, and modified via the Title V Operating Permit issued September 11, 2017	3.12	Operating Restriction	Off-gases from the electrostatic treater and produced water flash vessel shall be captured and sent to the VRU
Facility-wide, including AA-156	40 CFR 63, Subpart CCCCCC NESHAP for Source Category: Gasoline Dispensing Facilities 40 CFR 63.11110 and 63.11111, Subpart CCCCCC	3.13	HAP	Applicability
AA-156	40 CFR 63.11111(b), Subpart CCCCCC	3.14	HAP	Throughput restriction

3.1 The permittee shall limit the emissions of each criteria pollutant and hazardous air pollutants (HAPs) from the facility to less than the following amounts, in tons per year for each rolling 12-month period:

Pollutant	Emissions (tpy)
VOC	95.0
Total HAPs	24.0
Individual HAPs	9.5

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

3.2 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.)

3.3 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 3.2. This shall not apply to vision obscuration caused by uncombined water droplets.

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

3.4 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 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 The permittee shall only combust produced gas, natural gas, propane, or diesel in all combustion units operating at the facility.

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

3.6 The permittee shall operate all air emission equipment as efficiently as possible in order to minimize the emissions of air pollutants. Furthermore, the permittee shall perform routine maintenance on all air emissions equipment such that the equipment may be operated in an efficient manner.

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

3.7 For Emission Points AA-149, AA-152, and AA-153, the permittee shall not have emissions of ash and/or particulate matter from fossil fuel burning installations equal to or greater than 10 MMBtu per hour heat input but less than 10,000 MMBtu/hr heat input that exceeds the emission rate as determined by the following 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.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(b).)

3.8 For Emission Points AA-105a, 105b, AA-106, AA-140, AA-150, and AA-151, the permittee shall not have emissions of ash and/or particulate matter from fossil fuel burning installations of less than 10 MMBtu/hr that exceeds 0.6 lbs/MMBtu heat input.

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

3.9 For Emission Points AA-105a, AA-105b, AA-106, AA-150, AA-151, AA-152, and AA-153, the permittee shall not have sulfur oxides from any fuel burning installation in which fuel is burned primarily to produce heat or power by indirect heat transfer that exceeds 4.8 pounds (measured as sulfur dioxide) per million Btu heat input.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.4.A(1).)

3.10 For Emission Points AA-118, AA-119a, AA-119b, and AA-147, the permittee shall vent all emissions, except emissions resulting from thief hatch openings, to the flare (Emission Point AA-140).

(Ref.: Permit to Construct a Moderate Stationary Source issued December 18, 2008, and modified via the Title V Operating Permit issued September 11, 2017)

3.11 For Emission Point AA-140, the permittee shall demonstrate a control efficiency of at least 98% by operating the flare according to the requirements of 40 CFR 60.18(b), Subpart A, and the requirements specified in paragraphs (a) through (e) below:

a. The flare shall be operated at all times when emissions may be vented to it.

b. The flare shall be operated and maintained according to the manufacturer's recommendations.

c. The flare shall be operated with no visible emissions as determined by EPA Method 22, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.

d. The flare shall maintain a flare pilot flame or auto-igniter system at all times when emissions may be vented to the flare.

e. The flare shall only be used with a combustion gas mixture whose net heating value is 300 Btu/scf or greater if the flare is air or steam-assisted. If the flare is non-assisted, the flare shall only be used with a combustion gas mixture whose net heating value is 200 Btu/scf or greater.

(Ref.: Permit to Construct a Moderate Stationary Source issued December 18, 2008, and 40 CFR 63.11(b)(4)-(5), and 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.12 For Emission Point AA-101, low-pressure off-gases produced by the electrostatic treater and produced water flash vessel shall be captured and sent to the Vapor Recovery Unit (VRU). The recovered liquids shall be routed from the VRU to the oil storage tanks (Emission Points AA-119a, AA-119b, or AA-147). The gases from the VRU shall be routed to the low-pressure (LP) compressor system. During VRU upsets or maintenance down-time, the low-pressure off-gases may be vented to the incinerator (Emission Point AA-149) or directly to the atmosphere.

(Ref.: Permit to Construct a Moderate Stationary Source issued December 18, 2008, and modified via the Title V Operating Permit issued September 11, 2017)

3.13 The facility is subject to and shall comply with all applicable requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Source Category: Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCCC and the applicable General Provisions in 40 CFR 63, Subpart A.

(Ref.: 40 CFR 63.11110 and 63.11111, Subpart CCCCCC)

3.14 For Emission Point AA-156, the gasoline storage tank has a monthly throughput of less than 10,000 gallons and must comply with the requirements specified Conditions 4.1 and 4.2.

(Ref.: 40 CFR 63.11111(b), Subpart CCCCCC)

SECTION 4
WORK PRACTICES

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Work Practice
Facility-wide, including AA-156	40 CFR 63.11115(a), Subpart CCCCCC	4.1	Operation & Maintenance Requirements	Good air pollution control practices
	40 CFR 63.11116, Subpart CCCCCC	4.2		Work practices for gasoline handling

4.1 For Emission Point AA-156, the permittee must at all times, operate and maintain the gasoline storage tank, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(Ref.: 40 CFR 63.11115(a), Subpart CCCCCC)

4.2 The permittee shall comply with the following requirements for gasoline dispensing:

a. The permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

b. The permittee is not required to submit notifications or reports as specified in 40 CFR 63.11125, 63.11126, or subpart A of Part 63, but must have records available within 24 hours of a request by the DEQ to document gasoline throughput.

c. Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3).

(Ref.: 40 CFR 63.11116, Subpart CCCCCC)

SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.9.	5.1	Recordkeeping	Maintain records for a minimum of 5 years
Well	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.2	Gas Analysis	Conduct gas analysis
Facility-Wide	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.3	VOC	Monitoring and recordkeeping
			HAPs	
			Fuel Combusted	
			Produced Oil	
			Condensate	
			Produced Water	
			Produced Gas	
			Flared Gas	
AA-140	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.4	Flare Operations	Monitoring and recordkeeping
		5.5	Flare Records	
AA-101 and AA-149	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.6	Bypassing	Record the date, start time, duration, and amount of any off-gases bypassing VRU or the LP compressor system and determine VOC and HAP emissions from each bypass event
AA-142 AA-144	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.7	Compressor Blowdowns	Compressor blowdown records
Facility-wide	40 CFR 63.11111(e), Subpart CCCCCC	5.8	Fuel Throughput	Monitor monthly throughput
and AA-156	40 CFR 63.11115(b) and 63.11125(d)(1) and (2), Subpart CCCCCC	5..9	Malfunctions	Malfunction recordkeeping

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 the DEQ as required by Applicable Rules and Regulations or this permit upon request.

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

5.2 The permittee shall conduct a field gas analysis of the produced gas routed to the flare within ninety (90) days of issuance of this permit. Subsequent gas analyses shall be performed annually, not to exceed 14 months from the previous analysis. Each gas analysis shall include the following properties: hydrogen sulfide concentration, sulfur content, methane concentration (by volume), gross and net heating value, molecular weight, specific gravity, and speciated VOC components (minimally to C6+).

If a change is made at the facility, which causes the most recent gas analysis to no longer be representative, e.g., a well is completed, an existing well is recompleted, etc., or gas/oil processing equipment is changed, then the facility shall perform a gas analysis within ninety (90) days of the change.

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

5.3 In order to demonstrate compliance with the emission limitations specified in Section 3, the permittee shall monitor and record the following:

a. The VOC, total HAPs, and individual HAP emissions, in tons, on a monthly basis and for each rolling 12-month period. Emissions data shall be calculated utilizing gas flow measurement, gas analysis, and any other relevant information. The calculations shall be performed according to paragraphs (1) through (4) below.

(1) VOC and HAP emissions from truck loading operations shall be calculated using emission factors from the most recent version of EPA's AP-42 Section 5.2.

(2) VOC and HAP emissions from any stationary external combustion sources, (excluding the flare) shall be calculated using specific manufacturer's guaranteed rates. If manufacturer's guaranteed rates are not available, then applicable emission factors from EPA's AP-42 Section 1 shall be utilized.

(3) Fugitive VOC and HAP emissions from piping and components shall be calculated using the most recent gas analysis and emission factors from Table W-1A to Subpart W of 40 CFR 98. The permittee may request approval from the DEQ to use another methodology for calculating fugitive emissions.

(4) VOC and HAP emissions from flaring operations shall be calculated using the most recent gas analysis, the total metered gas flow to the flare, mass balance calculations, and a 98% destruction efficiency for those periods when the flare is in compliance with Conditions 3.10 and 3.11. For those periods when the flare is not in compliance with Conditions 3.10 and 3.11, the permittee must use the emissions reported in the deviation report required by Condition 6.1.

In the event that only the produced gas is metered, sampled, and analyzed, and the tank gas is not metered to the flare, then VOC and HAP emissions from the tanks contributing to the flared emissions shall be determined using the American Petroleum Institute's E&P Tanks. Flash gas production may also be determined by using laboratory measurement of the Gas-Oil-Ratio from a pressurized liquid sample or a process simulator computer program such as HYSIM, HYSYS, or PROMAX. Tank working and breathing losses may also be estimated using EPA AP-42 procedures. The permittee may request approval from MDEQ to use another methodology for calculating the emissions from the tanks.

b. The type and quantity of fuel combusted for each fuel burning equipment on a monthly basis.

c. The barrels of crude oil produced on a monthly basis.

d. The barrels of condensate produced on a monthly basis.

e. The barrels of produced water on a monthly basis.

f. The cubic feet of gas produced on a monthly basis.

g. The cubic feet of gas flared on a monthly basis.

The permittee shall keep all supporting documentation and/or calculations used to generate the records required by this condition including but not limited to purchase orders, lab results, strip charts, logbooks, etc.

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

5.4 For Emission Point AA-140, the permittee shall comply with the following monitoring requirements outlined in paragraphs (a) through (d).

a. The permittee shall continuously monitor and record the presence of the flare pilot flame by use of a thermocouple or any other equivalent device to detect the presence of a flame; or

b. The permittee shall continuously maintain and operate an auto-igniter system on the flare to ensure a flame is immediately restored when emissions are being sent to the flare. At a minimum, the permittee shall comply with the following:

(1) The auto-igniter system shall be an electric arc ignition system. The electric arc ignition system shall pulse continually and a device shall be installed and used to continuously monitor that the electric arc ignition system is operational.

(2) The auto-igniter system shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

(3) The auto-igniter system must be equipped with a malfunction alarm and a remote notification system that alerts facility personnel if the auto-igniter system fails to light the flame.

(4) If the auto-igniter system fails to light the flame, it must be relit as soon as safely possible and the auto-igniter system must be repaired or replaced as soon as practicable.

(5) Physical inspections of all equipment associated with the auto-igniter system shall be performed quarterly. The permittee shall respond to any observation of any auto-igniter failure and ensure the equipment is returned to proper operation as soon as practicable and safely possible after an observation or an alarm sounds.

c. The permittee shall demonstrate initial compliance with the visible emission limit in Condition 3.11.c within ninety (90) days of issuance of this permit by conducting an EPA Method 22 test for a period of two (2) consecutive hours. The test shall be conducted while the facility is operating at the representative flow to the flare. The permittee shall monitor and maintain records of the gas flow rate to the flare during the test.

If a change is made at the facility which causes the previous 2-hour visible emissions test to no longer be representative, e.g. a well is completed, an existing well is recompleted, etc., or the flare is replaced or modified, then the permittee must perform a Method 22 test within ninety (90) days of the change.

If the visible emissions limit in Condition 3.11.c is not met during the Method 22 test, corrective action shall be taken immediately. Following completion of the corrective action(s), the permittee shall immediately demonstrate compliance by performing an EPA Method 22 test for a period of two (2) hours.

d. Subsequent to the initial testing required in Condition 5.4.c,, the permittee shall perform monthly visible emissions tests for a minimum of fifteen (15) minutes using EPA Method 22 while the facility is operating with all gases being flared. If visible emissions are observed for a period greater than one (1) minute, corrective action shall be taken immediately.Following completion of the corrective action(s), the permittee shall immediately demonstrate compliance by performing an EPA Method 22 test for a period of two (2) hours and shall monitor and maintain records of the flare rate during the test. The monthly visible emissions tests shall be separated by at least fifteen (15) days between each test.

e. The permittee shall demonstrate compliance with Condition 3.11.e utilizing the net heating value from the gas analyses required by Condition 5.2.

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

5.5 For Emission Point AA-140, the permittee shall comply with the recordkeeping requirements outlined in paragraphs (a) through (d):

a. The permittee shall maintain a copy of the flare manufacturer operating and maintenance recommendations and detailed records of all maintenance performed on the flare.

b. The permittee shall maintain continuous records of the thermocouple or equivalent device output demonstrating the presence of a flame in the control flare whenever the facility is in operation.

c. The permittee shall maintain records of all EPA Method 22 tests, and details of any corrective/preventative action(s) taken.

d. The permittee shall maintain records of all gas analyses performed to determine the net heating value of the gas being combusted in the flare.

e. For the auto-igniter system, the permittee shall maintain records of an instances in which the auto-igniter system did not function, the dates and times of the occurrence, the corrective action taken, preventative measures adopted to prevent reoccurrence, all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the flare into normal operating conditions, and any maintenance activities conducted on the auto-igniter system.

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

5.6 For Emission Point AA-101 and AA-149, the permittee shall record the date, start time, duration, and amount of any off-gases that bypass the VRU or any gases from the VRU that bypass the LP compressor system. The permittee shall also note the reason gases bypassed the VRU and whether the gases were vented directly to the atmosphere or to the incinerator (Emission Point AA-149). If the gases are vented to the incinerator, the operating temperature of the incinerator shall be recorded at least once for each hour gases are vented to it. The permittee shall use this information to calculate the percentage deviation time that the VRU or subsequent LP compressor system was bypassed compared to the total run time for each semiannual period. Also, the permittee shall calculate the total VOC and HAP emissions from each bypass event and include those in the calculation of VOC and HAP emissions specified in Condition 5.3.

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

5.7 For Emission Points AA-142 and AA-144, the permittee shall maintain records of the occurrence of each compressor blowdown.

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

5.8 The permittee shall demonstrate that their monthly throughput for gasoline dispensing is less than the 10,000-gallon threshold level by keeping records of the monthly throughput as determined by 40 CFR 63.11132. Records required under this paragraph shall be kept for a period of 5 years.

(Ref.: 40 CFR 63.11111(e), Subpart CCCCCC)

5.9 For the gasoline dispensing facility and associated storage tanks, the permittee shall keep the following records:

a. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) of the air pollution control and monitoring equipment.

b. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 4.1, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(Ref.: 40 CFR 63.11115(b) and 40 CFR 63.11125(d)(1) and (2), Subpart CCCCCC)

SECTION 6
REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
Facility-Wide	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-101 AA-149	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.4	Semiannual reporting of the date, start time, duration and amount of off-gases bypassing the VRU and LP compressor system and emissions from each event.

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 synthetic minor monitoring 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. The report shall include the following:

a. Monthly and rolling 12-month totals for: produced crude oil (barrels), produced condensate (barrels), produced water (barrels), produced gas (MMSCF), gases flared (MMSCF), total VOC emissions (tons), total HAP emissions (tons), and individual HAP emissions (tons), including sample calculations;

b. Results of all produced gas analyses performed during the reporting period;

c. Details of any periods where the pilot flame was not present or the auto-igniter system was not operational, including date, start and end times, duration, cause, corrective and preventative actions taken, and whether or not any gases were being vented to the flare;

d. Copies of data sheets for all EPA Method 22 tests performed during the reporting period, including data on gas flow rate to the flare where required by Conditions

5.5.c. & d., and details of any accompanying corrective and preventative actions taken;

e. Continuous pilot flame monitor downtime data: monitor downtime event date, start and end times, duration, cause, corrective and preventive actions taken, and total duration monitor downtime for the reporting period; and

f. Auto-igniter system data: report of any instances in which the auto-igniter system did not function, the date and times of the occurrence, the corrective actions taken, preventative measures adopted to prevent reoccurrence, all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the flare into normal operating conditions, and any maintenance activities conducted on the auto-igniter system.

(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 DEQ shall contain a certification by a responsible official or duly authorized representative 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 Points AA-101 and AA-149, the permittee shall submit annual reports in accordance with Condition 6.2 with the date, start time, duration, and amount of off-gases that bypass the VRU or gasses from the VRU that bypass the LP compressor system. The permittee shall also report the percentage of time gases are bypassed during the semiannual period and total VOC and HAP emissions from each bypass event. The report shall note whether the gases were vented to the incinerator (Emission Point AA-149) or directly to the atmosphere. If gases are vented to the incinerator, the report shall also include the temperature of the incinerator recorded for each hour of the bypass event. If no bypasses occurred during the semiannual period, the facility shall submit a negative declaration.

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