

**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, Brookhaven Central Processing Facility
1030 California Road
Brookhaven, Mississippi
Lincoln County

*31° 35' 29.10" N
90° 31' 05.90" W*

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: December 3, 2020

Permit No.: 1620-00050

Effective Date: As specified herein.

Expires: November 30, 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 Designation	Description
AA-001	1-05-LH-BS	20 MMBTU/Hr Line Heater-Burner Stack
AA-002	2-05-HT-BS	5.0 MMBTU/Hr Heater Treater-Burner Stack
AA-003	3-05-LH-BS	2.6 MMBTU/Hr Inhibitor Oil Line Heater-Burner Stack
AA-004	4-05-SBP	Sand Blowdown Pit
AA-005	5-05-OST-V	1500 BBL Wet Oil Storage Tank vented to the Atmospheric Control Flare (AA-024)
AA-006	6a-05-OST-CV	5000 BBL Dry Oil Storage Tank vented to the Atmospheric Control Flare (AA-024)
AA-007	6b-05-OST-CV	5000 BBL Dry Oil Storage Tank vented to the Atmospheric Control Flare (AA-024)
AA-008	7a-05-ST-CV	2000 BBL Skimmer Tank vented to the Atmospheric Control Flare (AA-024)
AA-009	7b-05-ST-CV	2000 BBL Skimmer Tank vented to the Atmospheric Control Flare (AA-024)
AA-010	8a-05-WST-CV	5000 BBL Water Storage Tank
AA-011	8b-05-WST-CV	5000 BBL Water Storage Tank
AA-012	9-05-SOT-V	1500 BBL Slop Oil Tank
AA-013	10-05-IOT-V	1500 BBL Inhibitor Oil Tank vented to the Atmospheric Control Flare (AA-024)
AA-014	11-05-IOT-V	1500 BBL Inhibitor Oil Tank vented to the Atmospheric Control Flare (AA-024)
AA-015	12-05-IOT-V	1500 BBL Inhibitor Oil Tank vented to the Atmospheric Control Flare (AA-024)
AA-016	13-05-ITT-V	500 Gallon Inhibitor Transfer Tank
AA-017	14-05-ITT-V	500 Gallon Inhibitor Transfer Tank
AA-018	15-05-ITT-V	2000 Gallon Inhibitor Transfer Tank
AA-019	17-05-GST	100 BBL Glycol Storage Tank
AA-020	18-05-WST	100 BBL Demineralized Water Storage Tank
AA-021	21-05-ST	Chemical Storage Tank
AA-022	22-05-ST	Chemical Storage Tank
AA-023	23-05-ST	Chemical Storage Tank

Emission Point	Facility Designation	Description
AA-024	25-05-F	Atmospheric Control Flare
AA-025	31-05-F	Low Pressure (LP) Control Flare
AA-026	26-05-CB	High Pressure Compressor Blowdowns
AA-027	27-05-CB	Low Pressure Compressor Blowdowns
AA-028	24-05-FE	Fugitive Emissions
AA-029	28-05-HT-WG	Heater Treater-Flash Gas vented to the Low Pressure Control Flare (AA-025)
AA-030	32-10-H-BS	500 MBTU/Hr Heater Treater-Burner Stack
AA-031	35-17-IWT	400 BBL Injection Water Tanks
AA-032	36-17-IWT	400 BBL Injection Water Tanks
AA-033	30-10-LH-BS	25 MMBTU/Hr Line Heater-Burner Stack
AA-034	20-05-SUMP	Compressor Building Sump
AA-035	19-05-SUMP	Drainage Sump
AA-036	29-05-WFV-WG	Water Flash Vessel-Flash Gas vented to the Low Pressure Control Flare (AA-025)
AA-037	34-17-SEP	API Separator
AA-040	33-17-LH-BS	10 MMBTU/Hr Line Heater-Burner Stack
AA-041	37-17-TWP	Truck Washdown Pit
AA-042	38-17-RWT	3000 BBL Raw Water 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 ₂ S	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, or natural gas
3.6		All Pollutants	Minimizing Pollutants	
AA-001 AA-033 AA-040	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(b).	3.7	PM (Filterable only)	$E = 0.8808 * I^{-0.1667}$
AA-002 AA-003 AA-024 AA-025 AA-030	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.8	PM (Filterable only)	0.6 lbs per MMBtu
AA-004	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.9	Operating Restrictions	Limit sand pit blowdowns
AA-005 AA-006 AA-007 AA-008 AA-009 AA-013 AA-014 AA-015	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.10	Operating Restrictions	Emissions shall be vented to the Atmospheric Flare (AA-024)
AA-029 AA-036				Emissions shall be vented to the LP Flare (AA-025)
AA-024 AA-025	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-028	40 CFR Part 60, Subpart OOOOa Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015. 40 CFR 60.5365a(i), Subpart OOOOa	3.12	VOC HAP	General Applicability
	40 CFR 60.5397a(a-g), Subpart OOOOa	3.13		Develop a fugitive emission monitoring plan
	40 CFR 60.5397a(c)(7), Subpart OOOOa	3.14		Fugitive monitoring using optical gas imaging
	40 CFR 60.5397a(c)(8), Subpart OOOOa	3.15		Fugitive monitoring using Method 21
	40 CFR 60.5397a(h), Subpart OOOOa	3.16		Fugitive emissions source repair or replacement requirements
	40 CFR 60.5425a and Table 3, Subpart OOOOa	3.17		Applicability

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:

<u>Pollutant</u>	<u>Emissions (tpy)</u>
VOC	95.0
Total HAPs	24.0
Individual HAPs	9.5

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 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 (H₂S) 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, commercial propane, or natural gas, 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-001, AA-033, and AA-040, the maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations of equal to or greater than 10 MMBTU per hour per heat input shall not exceed an emission rate as determined by the relationship:

$$E = 0.8808 * I^{0.1667}$$

where "E" is the emission rate in pounds per MMBTU per hour heat input and "I" is the heat input in MMBTU per hour.

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

- 3.8. For Emission Points AA-002, AA-003, AA-024, AA-025, and AA-030, 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 Point AA-004, the permittee shall limit the operating time of the sand blowdown pit to no more than 730 hours during a rolling 12-month period.

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

- 3.10. For Emission Points AA-005, AA-006, AA-007, AA-008, AA-009, AA-013, AA-014, and AA-015, the permittee shall vent all emissions, except emissions resulting from thief hatch openings, to the Atmospheric Flare (Emission Point AA-024). For Emission Points AA-029 and AA-036, the permittee shall vent all emissions, except emissions resulting from thief hatch openings, to the Low Pressure (LP) Flare (Emission Point AA-025).

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

- 3.11. For Emission Points AA-024 and AA-025, the permittee shall demonstrate a control efficiency of at least 98% by operating the flares according to the requirements of 40 CFR 60.18(b), Subpart A, and the requirements specified in paragraphs (a) through (e) below:

- (a) The flares shall be operated at all times when emissions may be vented to them.
- (b) The flares shall be operated and maintained according to the manufacturer's recommendations.
- (c) The flares 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 flares shall maintain a flare pilot flame or auto-igniter system at all times when emissions may be vented to them.
- (e) The flares 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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

- 3.12. Emission Point AA-028 is subject to and shall comply with all applicable requirements of 40 CFR Part 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced after September 18, 2015. Emission Point AA-028 is classified as the collection of fugitive emissions components at a well site.

(Ref.: 40 CFR 60.5365a(i), Subpart OOOOa.)

- 3.13. For Emission Point AA-028, the permittee shall demonstrate compliance with Subpart OOOOa by monitoring all fugitive emission components, as defined in 40 CFR 60.5430a. For the purposes of this condition along with Conditions 3.15 and 3.16, fugitive emissions are defined as: Any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.

The permittee shall develop an emissions monitoring plan that covers the collection of fugitive emissions components within each company-defined area. This monitoring plan shall include the information and elements specified in paragraphs (a) through (j) below:

- (a) Frequency for conducting surveys.
 - (1) The permittee shall conduct an initial monitoring survey within 60 days of the startup of production, as defined in 40 CFR 60.5430a, for each collection of fugitive emissions components at a new well site.
 - (2) Thereafter, a monitoring survey shall be conducted at least semiannually. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart. Each monitoring survey shall observe each fugitive emissions component for fugitive emissions.
- (b) Technique used in detecting fugitive emissions (i.e. Method 21 from 40 CFR Part 60, Appendix A-7 or optical gas imaging).
- (c) Manufacturer and model number of fugitive emission detection equipment used.
- (d) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected. This includes timeframes for fugitive emission components that are unsafe to repair. At a minimum, the repair schedule shall meet the requirements of Condition 3.16.
- (e) Procedures and timeframes for verifying fugitive emission component repairs.
- (f) Records that will be kept and the length of time these records will be kept.
- (g) A site map.
- (h) A defined observation path that ensures all fugitive emissions components are within sight of the path. The observation path must account for interferences.
- (i) If the permittee utilizes Method 21, the plan shall also include a list of fugitive emissions components to be monitored and the method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.).

- (j) The plan shall also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with 40 CFR 60.5397(g)(3)(i) and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with 40 CFR 60.5397(g)(3)(ii) and (g)(4).

(Ref.: 40 CFR 60.5397a(a-g), Subpart OOOOa.)

3.14. If the permittee utilizes optical gas imaging, the monitoring plan required in Condition 3.13 shall include the information specified in subparagraphs (a) through (g) below:

- (a) Verification that the optical gas imaging equipment is capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions. The optical gas imaging equipment must be capable of imaging a gas that is half methane, half propane at a concentration of 10,000 parts per million (ppm) at a flow rate of ≤ 60 grams per hour (g/hr) from a quarter inch diameter orifice. This verification is an initial verification and may either be performed by the facility, by the manufacturer, or by a third party. For the purposes of complying with the fugitives emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.
- (b) Procedures for a daily verification check.
- (c) Procedures for determining the permittee's maximum viewing distance from the equipment and procedures for how the permittee will ensure that this distance is maintained.
- (d) Procedures for determining maximum wind speed during which monitoring can be performed and procedures for how the permittee will ensure monitoring occurs only at wind speeds below this threshold.
- (e) Procedures for conducting surveys, including how the permittee will ensure an adequate thermal background is present in order to view potential fugitive emissions, how the permittee will deal with adverse monitoring conditions, such as wind, and how the permittee will deal with interferences (e.g., steam).
- (f) Specification of the training and experience needed prior to performing surveys.
- (g) Procedures for calibration and maintenance. At a minimum, procedures must comply with those recommended by the manufacturer.

(Ref.: 40 CFR 60.5397a(c)(7), Subpart OOOOa.)

- 3.15. If the permittee utilizes Method 21 from 40 CFR Part 60, Appendix A-7, the monitoring plan required in Condition 3.12 shall include the information specified in paragraphs (a) and (b) below:
- (a) Verification that all monitoring equipment meets the requirements specified in Section 6.0 of Method 21 from 40 CFR Part 60, Appendix A-7. For purposes of instrument capability, the fugitive emissions definition shall be 500 ppm or greater methane using a FID-based instrument. If the permittee uses an analyzer other than a FID-based instrument, the permittee shall develop a site-specific fugitive emission definition that would be equivalent to 500 ppm methane using a FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to your compound of interest).
 - (b) Procedures for conducting surveys. At a minimum, these procedures shall ensure that the surveys comply with the relevant sections of Method 21 from 40 CFR Part 60, Appendix A-7, including Section 8.3.1.

(Ref.: 40 CFR 60.5397a(c)(8), Subpart OOOOa.)

- 3.16. For Emission Point AA-028, each identified source of fugitive emissions shall be repaired or replaced in accordance with paragraphs (a) through (c) below:
- (a) Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.
 - (b) If the repair or replacement is technically infeasible, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next well shutdown, well shut-in, after an planned or within 2 years, whichever is earlier.
 - (c) Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions. This survey shall comply with the requirements of subparagraphs (1) through (4), as applicable:
 - (1) For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the operator may resurvey the repaired fugitive emissions components using either Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.
 - (2) For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph must be taken of that component or the component must be tagged for identification purposes.

The digital photograph must include the date that the photograph was taken, must clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).

- (3) If the permittee utilizes Method 21 to resurvey the repaired fugitive emissions components, then the fugitive emissions component is considered repaired when the Method 21 instrument indicates a concentration of less than 500 ppm above background or when no soap bubbles are observed when the alternative screening procedures specified in Section 8.3.3 of Method 21 are used. The permittee shall utilize the Method 21 monitoring requirements specified in Condition 3.15(b) or the alternative screening procedures specified in Section 8.3.3 of Method 21.
- (4) If the permittee utilizes optical gas imaging to resurvey the repaired fugitive emissions components, then the fugitive emissions component is considered repaired when the optical gas imaging instrument shows no indication of visible emissions. The permittee shall utilize the optical gas monitoring requirements specified in Condition 3.14.

(Ref.: 40 CFR 60.5397a(h), Subpart OOOOa.)

- 3.17. For Emission Point AA-028, the permittee must comply with the General Provisions of 40 CFR 60.1 through 40 CFR 60.19 except for 40 CFR 60.11.

(Ref.: 40 CFR 60.5425a and Table 3 to Subpart OOOOa.)

**SECTION 4
WORK PRACTICES**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Work Practice
<i>This Section Has Been Intentionally Left Blank</i>				

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.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.2	Fuel	Keep records of type and quantity of fuels combust
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.3	Gas Analysis	Conduct gas analysis
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.4	VOC	Monitoring and Recordkeeping
			HAPs	
			Fuel Combusted	
			Produced Oil	
			Condensate	
			Produced Water	
			Produced Gas	
Flared Gas				
AA-004	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.5	Sand Blowdown Pit Records	Record operating hours
AA-024 AA-025	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.6	Flare Operation	Monitoring and recordkeeping
		5.7	Flare Records	
AA-026 AA-027	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.8	Compressor Records	Record compressor blowdowns
AA-028	40 CFR 60.5410a(j), Subpart OOOOa	5.9	VOC	Demonstration of initial compliance
	40 CFR 60.5415a(h), Subpart OOOOa	5.10		Demonstration of continuous compliance
	40 CFR 60.5397(i) and 60.5420a(c), Subpart OOOOa	5.11		Recordkeeping requirement

- 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 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. For the entire facility, the permittee shall monitor and record the type and quantity of each fuel used in each stationary combustion source. Fuel quality data shall be collected and maintained with sufficient detail to support the emission calculations required in Condition 5.4(a).

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

- 5.3. 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).)

- 5.4. 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) and (2) below.

- (1) 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.

- (2) 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 DEQ 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).)

- 5.5. For Emission Point AA-004, the permittee shall monitor and keep records of the hours of operation of the Sand Blowdown Pit as required by Condition 3.9.

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

- 5.6. For Emission Points AA-024 and AA-025, the permittee shall comply with the following monitoring requirements outlined in paragraphs (a) through (e).

- (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 5.6(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) by utilizing the net heating value from the gas analyses required by Condition 5.3.

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

5.7. For Emission Points AA-024 and AA-025, the permittee shall comply with the recordkeeping requirements outlined in paragraphs (a) through (e):

- (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).)

- 5.8. For Emission Points AA-026 and AA-027, the permittee shall record the number of incidents in which the high and low pressure compressors are blown down. The record shall be kept in log form and must be made available upon request during any inspection visit by DEQ personnel.

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

- 5.9. For Emission Point AA-028, the permittee shall demonstrate initial compliance with the fugitive emission standards for each collection of fugitive emissions components at a well site by complying with the requirements of paragraphs (a) through (e) below. The initial compliance period begins upon initial startup and ends no later than one (1) year after the initial startup date. The initial compliance period may be less than one full year.

- (a) The permittee shall develop a fugitive emissions monitoring plan as required in Condition 3.13.
- (b) The permittee shall conduct an initial monitoring survey as required in Condition 3.13(a).
- (c) The permittee shall maintain the records specified in Condition 5.11.
- (d) The permittee shall repair each identified source of fugitive emissions for each affected facility as required in Condition 3.16.
- (e) The permittee shall submit the initial annual report for each collection of fugitive emissions components at a well site as required in Condition 6.5.

(Ref.: 40 CFR 60.5410a(j), Subpart OOOOa)

- 5.10. For Emission Point AA-028, the permittee shall demonstrate continuous compliance with the fugitive emission standards for each collection of fugitive emissions components at a well site by complying with the requirements of paragraphs (a) through (d) below:

- (a) The permittee shall conduct periodic monitoring surveys as required in Condition 3.13(a).
- (b) The permittee shall repair or replace each identified source of fugitive emissions as required in Condition 3.16.
- (c) The permittee shall maintain the records specified in Condition 5.11.
- (d) The permittee shall submit annual reports for the collection of fugitive emissions components at a well site as required in Condition 6.5.

(Ref.: 40 CFR 60.5415a(h), Subpart OOOOa.)

- 5.11. For Emission Point AA-028, the permittee shall maintain the records identified in 40 CFR 60.7(f) and in all applicable paragraphs of 40 CFR 60.5420a(c)(1) through (c)(16), specifically the fugitive emission survey records required in 40 CFR 5420a(c)(15). This information includes, but is not limited to, date of the survey, beginning and end time of survey, name of operator, monitoring equipment used, and detailed information on located fugitives. All required records must be maintained either on-site or at the nearest local field office for at least five (5) years. Any required records which are submitted electronically via EPA's CDX may be maintained in electronic format.

(Ref.: 40 CFR 60.5397(i) and 40 CFR 60.5420a(c), Subpart OOOOa.)

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.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.2	Submit certified annual monitoring report.
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.3	All documents submitted to MDEQ shall be certified by a Responsible Official.
AA-004	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.4	Report sand blowdown pit hours of operation
AA-028	40 CFR 60.5420a(b), Subpart OOOOa	6.5	Reporting requirements

6.1. Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) working days of the time the deviation began.

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

6.2. Except as otherwise specified herein, the permittee shall submit a certified annual 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 5.6(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 signed by a responsible official stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

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

- 6.4. For Emission Point AA-004, the permittee shall report the hours of operation of the sand blowdown pit.

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

- 6.5. For Emission Point AA-028, the permittee shall submit annual reports containing the information specified in 40 CFR 60.5420a(b)(1), (b)(7), and (b)(11). The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to Condition 5.11. Subsequent annual reports are due no later than same date each year as the initial annual report. If the permittee owns or operates more than one affected facility, the permittee may submit one report for multiple affected facilities provided the report contains all of the information required as specified in 40 CFR 60.5420a(b)(1) through (b)(8), as applicable, except as provided in 40 CFR 60.5420a(b)(13).

The permittee must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) The permittee must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart

is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for at least 90 calendar days, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified 40 CFR Part 60 Subpart OOOOa regardless of the method in which the reports are submitted.

(Ref.: 40 CFR 60.5420a(b), Subpart OOOOa.)