

# **STATE OF MISSISSIPPI AIR POLLUTION CONTROL PERMIT**

**TO CONSTRUCT AIR EMISSIONS EQUIPMENT**

**THIS CERTIFIES THAT**

Petro Harvester Operating Company LLC, Pickens EOR Central Processing  
Facility

To Be Determined  
Pickens, Mississippi  
Holmes County

32.82182°N, 89.97972°W

has been granted permission to construct air emissions equipment to comply with the emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

**MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD**

---

**AUTHORIZED SIGNATURE**

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Issued:** \_\_\_\_\_

**Permit No.: 1720-00091**

Draft/Proposed

## SECTION 1

### A. GENERAL CONDITIONS

1. This permit is for air pollution control purposes only.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D.)
2. Any activities not identified in the application are not authorized by this permit.  
(Ref.: Miss. Code Ann. 49-17-29 1.b)
3. The knowing submittal of a permit application with false information may serve as the basis for the Permit Board to void the permit issued pursuant thereto or subject the applicant to penalties for operating without a valid permit pursuant to State Law.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(5).)
4. It is the responsibility of the applicant/permittee to obtain all other approvals, permits, clearances, easements, agreements, etc., which may be required including, but not limited to, all required local government zoning approvals or permits.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.D(6).)
5. The issuance of a permit does not release the permittee from liability for constructing or operating air emissions equipment in violation of any applicable statute, rule, or regulation of state or federal environmental authorities.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(7).)
6. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit, unless halting or reducing activity would create an imminent and substantial endangerment threatening the public health and safety of the lives and property of the people of this state.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(a).)
7. The permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. Sufficient cause for a permit to be reopened shall exist when an air emissions stationary source becomes subject to Title V. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(b).)
8. The permit does not convey any property rights of any sort, or any exclusive privilege.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(c).)
9. The permittee shall furnish to the DEQ within a reasonable time any information the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee shall furnish such

records to the DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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

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

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

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

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

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

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

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

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

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

- a) To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b) At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emissions.

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

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

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

- b) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;  
or
- c) A change in federal, state, or local laws or regulations that require either a temporary or permanent reduction or elimination of previously authorized air emission.

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

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

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

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

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

18. **Severability:** The provisions of this permit are severable. If any provision of the permit, or the application of any provision of the permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby.

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

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

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

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

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

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

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

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

operation will be assumed to occur upon certification of construction, unless the permittee specifies differently in writing.

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

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

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

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

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

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

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

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

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

27. Compliance Testing: Regarding compliance testing:

- a) The results of any emissions sampling and analysis shall be expressed both in units consistent with the standards set forth in any Applicable Rules and Regulations or this permit and in units of mass per time.
- b) Compliance testing will be performed at the expense of the permittee.
- c) Each emission sampling and analysis report shall include but not be limited to the following:
  - (1) detailed description of testing procedures;
  - (2) sample calculation(s);
  - (3) results; and
  - (4) comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit.

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

**B. GENERAL NOTIFICATION REQUIREMENTS**

1. Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(2).)
2. The permittee must notify DEQ in writing when construction does not begin within eighteen (18) months of issuance or if construction is suspended for eighteen (18) months or more.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(3).)
3. Upon the completion of construction or installation of an approved stationary source or modification, and prior to commencing operation, the applicant shall notify the Permit Board that construction or installation was performed in accordance with the approved plans and specifications on file with the Permit Board.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(1) and (3).)
4. The Permit Board shall be promptly notified in writing of any change in construction from the previously approved plans and specifications or permit. If the Permit Board determines the changes are substantial, it may require the submission of a new application to construct with “as built” plans and specifications. Notwithstanding any provision herein to the contrary, the acceptance of an “as built” application shall not constitute a waiver of the right to seek compliance penalties pursuant to State Law.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(2).)

## SECTION 2 EMISSION POINT DESCRIPTION

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

Emission Point	Description
AA-001	1750 hp natural gas-fired, high pressure CO <sub>2</sub> One-Stage Reciprocating Compressor No. 1
AA-002	1750 hp natural gas-fired, high pressure CO <sub>2</sub> One-Stage Reciprocating Compressor No. 2
AA-003	350 hp natural gas-fired, low pressure CO <sub>2</sub> One-Stage Reciprocating Compressor No. 1 routed to high pressure compressors (AA-001 and AA-002)
AA-004	100 hp natural gas-fired, Flash Gas One-Stage Reciprocating Compressor No. 1 routed to low pressure compressor (AA-003)
AA-005	536 hp non-emergency, natural gas-fired Generator No. 1
AA-006	536 hp non-emergency, natural gas-fired Generator No. 2
AA-007	Flare
AA-008	Vapor Recovery Unit
AA-009	84,000 gallon, fixed roof, Wet Oil Storage Tank routed to Vapor Recovery Unit (AA-008)
AA-010	210,000 gallon, fixed roof, Dry Oil Storage Tank routed to Vapor Recovery Unit (AA-008)
AA-011	420,000 gallon, fixed roof, Produced Water Storage Tank routed to Vapor Recovery Unit (AA-008)
AA-012	420,000 gallon, fixed roof, Produced Water Storage Tank routed to Vapor Recovery Unit (AA-008)
AA-013	Truck Loading routed to Vapor Recovery Unit (AA-008)
AA-014	Fugitive Emissions
AA-015	High Pressure Separator with emissions routed to high pressure compressors (AA-001 and AA-002)
AA-016	Low Pressure Separator with emissions routed to low pressure compressor (AA-003)

### 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	≤ 99.0 tpy
		3.2	HAP	≤ 24.0 tpy of total HAP, ≤ 9.0 tpy of single HAP
		3.3	Fuel	Combust only natural gas or propane
	11 Miss. Admin. Code Pt. 2, R. 1.3.A.	3.4	Opacity	≤ 40%
	11 Miss. Admin. Code Pt. 2, R. 1.3.B.	3.5	Equivalent Opacity	≤ 40%
	11 Miss. Admin. Code Pt. 2, R. 1.4.B(2).	3.6	H <sub>2</sub> S	One (1) grain per 100 standard cubic feet
AA-001 AA-002 AA-003 AA-004 AA-005 AA-006	40 CFR 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) 40 CFR 63.6585, 63.6665, and 63.6590(c), Subpart ZZZZ	3.7		Applicability
	40 CFR 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Combustion Engines) 40 CFR 60.4230(a)(4), Subpart JJJJ	3.8		Applicability
	40 CFR 60.4233(e), 60.4234, and Table 1, Subpart JJJJ	3.9	NO <sub>x</sub>	≤ 1.0 g/hp-hr
			CO	≤ 2.0 g/hp-hr
			VOC	≤ 0.7 g/hp-hr
	40 CFR 60.4243(b)(1), Subpart JJJJ	3.10	Engine	Purchase certified engine
	40 CFR 60.4243(e), Subpart JJJJ	3.11	Fuel	Propane provisions
	40 CFR 60.4243(g), Subpart JJJJ	3.12	Air-to-Fuel Ratio	Maintain and operate AFR controller
AA-001 AA-002	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(b).	3.13	PM/PM <sub>10</sub> (filterable only)	$E = 0.8808 \times I^{-0.1667}$
AA-003 AA-004 AA-005 AA-006 AA-007	11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).	3.14		≤ 0.6 lb/MMBTU
AA-007	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.15	VOC	Demonstrate a control efficiency of 98% by operating according to 40 CFR 60.18
		3.16		Operate when the VRU is not operating properly
AA-008		3.17		Recovered liquids and gases shall be returned to the process



AA-009 AA-010 AA-011 AA-012 AA-013		3.18		Route all produced gas to the VRU or flare
AA-014	40 CFR 60, Subpart OOOOa (Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015)	3.19		Applicability
	40 CFR 60.5365a(i), Subpart OOOOa			
	40 CFR 60.5397a(a-g), Subpart OOOOa	3.20		Develop a fugitive emission monitoring plan
	40 CFR 60.5397a(h), Subpart OOOOa	3.21		Fugitive emission source repair or replacement requirements
	40 CFR 60.5425a and Table 3, Subpart OOOOa	3.22	General Provisions	Applicability

3.1 For the entire facility, the permittee shall not emit more than 99.0 tons per year (tpy) of volatile organic compounds (VOC) determined for each consecutive 12-month period on a rolling monthly basis.

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

3.2 For the entire facility, the permittee shall not emit more than 24.0 tons per year (tpy) of total combined hazardous air pollutants (HAPs) and no more than 9.0 tons per year (tpy) of any single hazardous air pollutant (HAP) as determined for each consecutive 12-month period.

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

3.3 For the entire facility, the permittee shall only combust natural gas or propane, in accordance with **Condition 3.11**, in all combustion units operating at the facility.

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

3.4 For the entire facility, except as otherwise specified or limited herein, the permittee shall not cause, permit, or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial, or waste disposal process which exceeds forty (40) percent opacity subject to the exceptions provided in (a) & (b).

(a) Startup operations may produce emissions which exceed 40% opacity for up to fifteen (15) minutes per startup in any one-hour period and not to exceed three (3) startups per stack in any twenty-four (24) hour period.

(b) Emissions resulting from soot blowing operations shall be permitted provided such emissions do not exceed 60% opacity, and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel any one hours.

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

- 3.5 For the entire facility, except as otherwise specified or limited herein, the permittee shall not cause, allow, or permit the discharge into the ambient air from any point source or emissions, any air contaminant of such opacity as to obscure an observer's view to a degree in excess of 40% opacity, equivalent to that provided in **Condition 3.4**. This shall not apply to vision obscuration caused by uncombined water droplets.

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

- 3.6 For the entire facility, the permittee shall not permit the emission of any gas stream which contains hydrogen sulfide (H<sub>2</sub>S) 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).)

- 3.7 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee is subject to and shall comply with all applicable requirements of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) and the General Provisions (40 CFR 63, Subpart A) as outlined in Table 8 of 40 CFR 63, Subpart ZZZZ.

These emission points are new stationary RICE located at an area source that shall meet the requirements of 40 CFR 63, Subpart ZZZZ, by meeting the requirements of 40 CFR 60, Subpart JJJJ. No further requirements apply under 40 CFR 63, Subpart ZZZZ.

(Ref.: 40 CFR 63.6585, 63.6665, and 63.6590(c), Subpart ZZZZ)

- 3.8 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee is subject to and shall comply with all applicable requirements of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) and the General Provisions (40 CFR 60, Subpart A) as outlined in Table 3 of 40 CFR 60, Subpart JJJJ.

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

- 3.9 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee shall not emit more than 1.0 grams per horsepower-hour of nitrogen oxides (NO<sub>x</sub>), 2.0 grams per horsepower-hour of carbon monoxide (CO), and 0.7 grams per horsepower-hour of volatile organic compounds (VOC). The permittee shall achieve these emission standards over the entire life of the engine.

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

- 3.10 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee shall demonstrate compliance with the emission limitations specified in **Condition 3.9** by purchasing a certified engine.

(Ref.: 40 CFR 60.4243(b)(1), Subpart JJJJ)

- 3.11 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee may operate the engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the permittee must conduct a performance test in accordance with 40 CFR 60.4244, Subpart JJJJ, to demonstrate compliance with the emission standards of **Condition 3.9**.  
(Ref.: 40 CFR 60.4243(e), Subpart JJJJ)
- 3.12 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee shall maintain and operate the air-to-fuel ratio appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.  
(Ref.: 40 CFR 60.4243(g), Subpart JJJJ)
- 3.13 For Emission Points AA-001 and AA-002, the permittee shall not exceed the maximum permissible emission rate of ash and/or particulate matter from fossil fuel burning installations of equal to or greater than 10 million BTU per hour heat input as determined by the relationship  $E = 0.8808 \times I^{0.1667}$ , 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).)
- 3.14 For Emission Points AA-003, AA-004, AA-005, AA-006, and AA-007, the permittee shall not exceed the maximum permission emission rate of ash and/or particulate matter from fossil fuel burning installations of less than 10 million BTU per hour heat input of 0.6 pounds per million BTU per hour heat input.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.3.D(1)(a).)
- 3.15 For Emission Point AA-007, the permittee shall demonstrate a control efficiency of at least 98% by operating the control flare according to the requirements of 40 CFR 60.18(b), Subpart A, and **Condition 4.2** at all times when receiving gas streams.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.16 For Emission Point AA-007, the permittee shall only operate the flare if the VRU (Emission Point AA-008) is nonoperational or malfunctioning. Emission Point AA-008 shall be repaired as soon as possible and returned to service at which time operation of Emission Point 007 shall cease. (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.17 For Emission Points AA-008, the permittee shall route all recovered gases and liquids back to the process.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)
- 3.18 For Emission Points AA-009, AA-010, AA-011, AA-012, and AA-013, the permittee shall route all produced gas to the vapor recovery unit (Emission Point AA-008) or the flare (Emission Point AA-007) for control.  
(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

- 3.19 For Emission Point AA-014, the permittee is subject to and shall comply with all the applicable requirements of the Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After September 18, 2015 (40 CFR 60, Subpart OOOOa) and the General Provisions (40 CFR 60, Subpart A).

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

- 3.20 For Emission Point AA-014, the permittee shall demonstrate compliance with 40 CFR 60, Subpart OOOOa, by monitoring all fugitive emission components, as defined in 40 CFR 60.5430a. For the purposes of this condition, 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 specified in paragraphs (a) through (l) below:

- (a) 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. A monitoring survey shall be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least four (4) months apart. Each monitoring survey shall observe each fugitive emissions component, as defined in 40 CFR 60.5430a, for fugitive emissions.
- (b) The permittee shall specify the technique used in determining the presence of fugitive emissions (i.e. Method 21 from 40 CFR 60, Appendix A-7, or optical gas imaging).
- (c) The permittee shall include the manufacturer and model number of all fugitive emission detection equipment used.
- (d) The permittee shall include the 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 minimum, the repair schedule shall meet the requirements of **Condition 3.21**.
- (e) The permittee shall include procedures and timeframes for verifying fugitive emission component repairs.
- (f) The permittee shall specify what records will be kept and the length of time these records will be kept.
- (g) If the permittee utilizes optical gas imaging, the monitoring plan shall include the information specified in subparagraphs (1) through (7) below:
  - (1) Verification that the optical gas imaging equipment is capable of imaging gases in the spectral range for the compound of highest concentrations 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  $\leq 60$  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 fugitive emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.

- (2) Procedures for a daily verification check.
  - (3) 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.
  - (4) 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.
  - (5) 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).
  - (6) Specification of the training and experience needed prior to performing surveys.
  - (7) Procedures for calibration and maintenance. At a minimum, procedures must comply with those recommended by the manufacturer.
- (h) If the permittee utilizes Method 21 from 40 CFR 60, Appendix A-7, the monitoring plan shall include the information specified in subparagraphs (1) and (2) below. For the purposes of complying with the fugitive emissions monitoring program using Method 21, a fugitive emission is defined as an instrument reading of 500 ppm or greater.
- (1) Verification that all monitoring equipment meets the requirements specified in Section 6.0 of Method 21 from 40 CFR 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 an FID-based instrument, the permittee shall develop a site specific fugitive emission definition that would be equivalent to 500 ppm methane using an FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to the compound of interest).
  - (2) 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 60, Appendix A-7, including Section 8.3.1.

- (i) A site map.
- (j) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.
- (k) 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.)
- (l) 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), Subpart OOOOa, and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with 40 CFR 60.5397(g)(3)(ii).

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

3.21 For Emission Point AA-014, the permittee shall repair or replace each identified source of fugitive emissions 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, would require 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 unscheduled, planned or emergency vent blowdown or within two (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 3.20(h)(2)** 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 3.20(g)**.

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

- 3.22 For Emission Point AA-014, 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, Subpart OOOOa)

## SECTION 4 WORK PRACTICES

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
Facility Wide	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	4.1	VOC	Operate all equipment as efficiently as possible and perform routine maintenance
AA-007		4.2		Control flare operating requirements when VRU is nonoperational

- 4.1 For the entire facility, the permittee shall operate all air emissions 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).)

- 4.2 For Emission Point AA-007, the permittee shall operate the control flare according to the requirements specified below:

- (a) The control flare shall be operated at all times Emission Point AA-008 is not operating or is operating in such a way that does not minimize the emissions of air pollutants and 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 permittee shall maintain a flare pilot flame 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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)



## SECTION 5 MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
Facility Wide	11 Miss. Admin. Code Pt. 2, R. 2.9.	5.1	Recordkeeping	Maintain records for a minimum of five (5) years
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.2		Emission calculations
AA-001 AA-002 AA-003 AA-004 AA-005 AA-006	40 CFR 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Combustion Engines) 40 CFR 60.4245(a), Subpart JJJJ	5.3		SI RICE recordkeeping requirements
AA-007 AA-008	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.4	Recordkeeping	Manufacturers' specifications
		5.5	Monitoring	Gas analysis
AA-007		5.6	Auto-ignitor	Monitoring requirements
		5.7		Recordkeeping requirements
AA-008		5.8	Bypass	Record periods of bypassing VRU
AA-014	40 CFR 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 60.5410a(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 60.5420a(c), Subpart OOOOa	5.11		Recordkeeping requirements

5.1 For the entire facility, the permittee shall retain all required records, monitoring data, supporting information, and reports for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, all original strip-chart recordings or other data for continuous monitoring instrumentation, and copies of all reports required by this permit. Copies of such records shall be submitted to MDEQ as required by Applicable

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

5.2 For the entire facility, the permittee shall maintain the following records in order to demonstrate compliance with the limitations specified in Section 3:

- (a) The amount of VOC, individual HAP, and total HAPs emitted, in tons per year, on a monthly basis for each consecutive 12-month period on a rolling basis. This

record shall demonstrate compliance utilizing gas flow measurement, gas analysis, calculations, and any other relevant information.

- (b) The cubic feet of natural gas burned, as fuel, on a monthly basis.
- (c) The cubic feet of gas produced on a monthly basis
- (d) The cubic feet of gas recovered on a monthly basis
- (e) The cubic feet of gas flared on a monthly basis
- (f) Fuel quality data to support the emission calculations.
- (g) The throughput of truck loading operations, in gallons per year, on a monthly basis for each consecutive 12-month period on a rolling basis.

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

- 5.3 For Emission Points AA-001, AA-002, AA-003, AA-004, AA-005, and AA-006, the permittee shall keep records of the information below:

- (a) All notifications submitted to comply with 40 CFR 60, Subpart JJJJ, and all documentation supporting any notification.
- (b) Maintenance conducted on the engine.
- (c) Documentation from the manufacturer that the engine is certified to meet the emission standards.

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

- 5.4 For Emission Points AA-007 and AA-008, the permittee shall maintain a copy of the manufacturers' operating and maintenance recommendations and detailed records of all maintenance performed on the equipment.

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

- 5.5 For Emission Points AA-007 and AA-008, the permittee shall conduct a field gas analysis of the gas routed to the flare or VRU. The initial gas analysis shall be performed within ninety (90) days of initial startup of the facility and subsequent gas analysis shall be performed within 24 months from the previous one. 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 & HAP components.

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

- 5.6 For Emission Point AA-007, the permittee shall comply with the following monitoring requirements outlined in paragraphs (a) through (d):

- (a) The permittee shall continuously maintain and operate an auto-ignitor 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-ignitor 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-ignitor 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 remote notification system that alerts facility personnel if the auto ignition 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.
- (b) The permittee shall demonstrate initial compliance with the visible emissions limits in **Condition 4.2(c)** by conducting an EPA Method 22 test for a period of two (2) consecutive hours when gas is routed to the flare. 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 the visible emissions limit in **Condition 4.2(c)** is not met during the Method 22 test, corrective action shall be taken immediately. Immediately following completion of the corrective action(s), the permittee shall demonstrate compliance by performing an EPA Method 22 test for a period of two (2) hours.
- (c) Subsequent to the initial testing required in paragraph (b) of this condition, 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. Immediately following completion of the corrective action(s), the permittee shall 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.
- (d) The permittee shall demonstrate compliance with **Condition 4.2(e)** utilizing the net heating value from the gas analyses required by **Condition 5.5**.

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

- 5.7 For Emission Point AA-007, the permittee shall comply with the following 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 records of all EPA Method 22 tests, and details of any corrective/preventative action(s) taken.
- (c) The permittee shall maintain records of all gas analyses performed to determine the net heating value of the gas being combusted in the flare.
- (d) For the auto-igniter system, the permittee shall maintain records 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).)

- 5.8 For Emission Point AA-008, the permittee shall record the date, start time, duration, and amount of any off-gases that bypasses the VRU or any gases from the VRU that are not routed to the process.

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

- 5.9 For Emission Point AA-014, 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 3.20**.
- (b) The permittee shall conduct an initial monitoring survey as required in **Condition 3.20(a)**.
- (c) The permittee shall maintain the records specified in **Condition 5.10**.
- (d) The permittee shall repair each identified source of fugitive emissions for each affected facility as required in **Condition 3.21**.
- (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-014, 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 3.20(a)**.

- (b) The permittee shall repair or replace each identified source of fugitive emissions as required in **Condition 3.21**.
- (c) The permittee shall maintain the records specified in **Condition 5.10**.
- (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-014, 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 40 CFR 5420a(c)(15). 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 60.5420a(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 any deviations within five (5) days
		6.2	Submit certified annual monitoring report
		6.3	All documents submitted to MDEQ shall be certified by a Responsible Official or Duly Authorized Representative
AA-001 AA-002 AA-003 AA-004 AA-005 AA-006	40 CFR 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Combustion Engines) 40 CFR 60.4245(d), Subpart JJJJ	6.4	Performance testing
AA-014	40 CFR 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 60.5420a(b), Subpart OOOOa	6.5	Reporting requirements

6.1 For the entire facility, 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 preventative 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 For the entire facility, except as otherwise specified here in, the permittee shall submit a certified annual monitoring report postmarked no later than the 31<sup>st</sup> of January for the preceding calendar year. This report shall address any required monitoring specified in the permit. This report shall also contain the information required by **Conditions 5.2, 5.6, 5.7, and 5.8**. Where no monitoring data is required to be reported and/or there are no deviations to report, the report shall contain the appropriated negative declaration.

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

6.3 For the entire facility, any document required by this permit to be submitted to MDEQ, the permittee shall include a certification signed 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-001, AA-002, AA-003, AA-004, AA-005, and AA-006, if propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the permittee shall submit a copy of each

performance test as conducted in 40 CFR 60.4244, Subpart JJJJ, within 60 days after the test has been completed.

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

- 6.5 For Emission Point AA-014, the permittee shall submit annual reports containing the information specified in 40 CFR 60.5420a(b)(1), (7), and (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 5.9. Subsequent annual reports are due in accordance with the annual reports required in Condition 6.2. 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 (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 at <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, the permittee 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 60, Subpart OOOOa, regardless of the method in which the reports are submitted.

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