STATEMENT OF BASIS
AIR CONSTRUCTION AND SYNTHETIC MINOR OPERATING
OIL PRODUCTION GENERAL PERMIT
Permit No. MSOPGP

I. PURPOSE

The Oil Production General Permit (OPGP) will cover owners and operators of oil wells drilled for the primary purpose of producing oil that route the associated produced gas to a flare due to the unavailability of an adjacent natural gas pipeline.

These types of facilities have emissions of the criteria pollutant, Volatile Organic Compounds (VOC), from venting the well's produced gas, which may exceed the Prevention of Significant Deterioration (PSD) and Title V major source thresholds. In order to reduce the emissions below PSD major source threshold of 250 tons per year and the Title V major source threshold of 100 tons per year, these facilities will be subject to a federally enforceable permit condition requiring the produced gas to be controlled or captured. In order to establish this federally enforceable requirement, the facilities must obtain an air permit to construct and/or operate as required in 11 Miss. Admin. Code Pt. 2, Ch. 2.

The state regulation, 11 Miss. Admin. Code. Pt. 2, R.2.11, allows general permits to be issued for the construction and/or operation of a stationary source. Due to the potential number of oil production operations in Mississippi and the similarity of the individual permits that have historically been issued, MDEQ believes that the development of an Oil Production General Permit is appropriate for these operations. At this time, we are not proposing to include any operation primarily engaged in gas production in the general permit.

II. EQUIPMENT AND PROCESSES TYPICAL OF OIL PRODUCTION OPERATION

A conventional crude oil site produces oil and gas from onsite well(s) or nearby well(s). The gas/oil mixture enters a separator, or series of separators, where the mixture is separated. A separator may include a gas-fired heater treater. Following separation, oil and water are piped to onsite storage tanks and the produced gas is piped to a flare for combustion. Gaseous emissions from the storage tanks, including working and breathing losses and flash gas, can be piped to the flare for combustion. Oil is loaded from the storage tanks using tanker trucks.

Loading emissions are typically vented to the atmosphere but may be routed to a flare. Water may also be loaded from the storage tanks using tanker trucks or piped to a nearby injection well for disposal. Sites may include small gas-fired line heaters; reciprocating internal combustion engines for pumping, compression, or power; as well as, small miscellaneous chemical storage vessels for well and/or engine maintenance.

III. APPLICABILITY AND COVERAGE

a) The OPGP covers the State of Mississippi.

b) This permit may cover new and existing oil producing facilities operating in the State of Mississippi which fall under SIC 1311 and have air emissions associated with the construction and operation of synthetic minor oil production facilities equipped with control devices or operated in a manner approved by MDEQ for control of air emissions.

c) Any oil well producing a gas stream containing hydrogen sulfide in excess of one (1) grain per 100 standard cubic feet is not eligible for this general permit.

d) For onshore activities under Standard Industrial Classification (SIC) Major Group 13: Oil and Gas Extraction, *a facility* means, all of the pollutant-emitting activities included in Major Group 13 that are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on surface sites that are located within ¼ mile of one another (measured from the center of the equipment on the surface site) and they share equipment. Shared equipment includes, but is not limited to, produced fluids storage tanks, phase separators, natural gas dehydrators or emissions control devices. A surface site is any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

e) This permit is for air pollution control purposes only and does not address or permit the discharge of any wastewater, disposal of any solid or hazardous waste, or discharge of storm water from the site.

f) Any facility subject to 40 CFR 63, Subpart HH – National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities is not eligible for this general permit.

g) All flares used to comply with Standards of Performance for Crude Oil and Natural Gas Facilities, Subpart OOOOa, for storage vessels (or tanks) will be 60.18(b) compliant. For facilities not subject to Subpart OOOOa that request a federally enforceable requirement to route emissions to the flare from storage vessels, the flare will be 60.18(b) compliant except an auto-igniter system may be used in lieu of a continuous pilot flame.

IV. FEDERALLY ENFORCABLE PERMIT LIMITATIONS

In order to maintain emissions below Title V thresholds, the OPGP establishes the following federally enforceable operational standards, and monitoring and recordkeeping conditions:

a) Emissions of each criteria pollutant, including PM_{10}, SO_2, NO_X, CO, and VOC, shall be limited to 95.0 tons per year (tpy).

b) Monitor and record monthly emissions of PM_{10}, SO_2, NO_x, CO, and VOC in tons on a 12-month rolling basis. Emissions shall be calculated utilizing gas flow measurement, gas analysis, and any other relevant information, including type and quantity of fuel combusted in on-site equipment.

c) Emissions of total hazardous air pollutants (HAPs) from each facility shall be limited to 24 tpy, with each individual HAP limited to 9.5 tpy.

- Monitor and record monthly emissions of total HAPs and individual HAP emissions in tons on a 12-month rolling basis. Emissions shall be calculated utilizing gas flow measurement, gas analysis, and any other relevant information.

d) Combust only produced gas, propane, natural gas, and diesel in fuel burning units.

- Record the type and quantity of each fuel used in each stationary combustion source.

e) Route all produced gas to the control flare.

- Monitor and record the cubic feet of gas produced on a monthly basis.
- Monitor and record the cubic feet of gas flared on a monthly basis.

The flare required by the OPGP will be allowed to use a maximum destruction efficiency of 98% based on the coverage recipient installing and operating the flare in accordance with the Section 3 requirements. The OPGP contains monitoring, recordkeeping and reporting requirements necessary to demonstrate compliance with the flare requirements. These conditions can be found in Sections 5 and 6 of the OPGP.

f) Route emissions from the crude oil storage vessels and condensate storage vessels to the control flare.

- Request a federally enforceable control requirement for the tanks.
- Monitor and record the cubic feet of gas flared on a monthly basis.

For any tank subject to Subpart OOOOa, the permittee shall only use a continuous flare pilot flame in accordance with Subpart OOOOa.

In the event the permittee does not request a federally enforceable control requirement for tanks, uncontrolled VOC and HAP emissions shall be utilized to demonstrate compliance with the tons per year emission limitations in Section 3 of the OPGP even if tank emissions are routed to the flare. Tank emissions shall be determined using the American Petroleum Institute's E&P Tanks. Flash gas production may also be determined by using laboratory measurement of the Gas-Oil-Ratio from a pressurized liquid sample or a process simulator computer program, such as HYSIM, HYSYS or PROMAX. Tank working and breathing losses may also be estimated using EPA AP-42 procedures. The permittee may request approval from MDEQ to use another methodology for calculating the emissions from the tanks.

V. POTENTIALLY APPLICABLE REQUIREMENTS

Potentially applicable regulations, as well as any additional monitoring, recordkeeping, and reporting requirements necessary to demonstrate compliance with both the federal and state terms and conditions of the general permit, are provided in the "Emission Limitations and Standards" section of the general permit. Associated with each requirement is a citation of the federal or state regulation upon which the authority to include that requirement is based.

a) 40 CFR 60 – Standards of Performance For New, Reconstructed, or Modified Stationary Sources

Portions of the following subparts are potentially applicable to an eligible coverage recipient:

- Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.
- Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
- Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.
- Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after August 23, 2011, and on or before September 18, 2015.
- Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015.

b) 40 CFR 63 - National Emission Standards for Hazardous Air Pollutants For Source Categories

Portions of the following subpart are potentially applicable to an eligible coverage recipient:

- Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

c) New Source Review (NSR)

Facilities granted coverage under the OPGP are not classified as major stationary sources under the Prevention of Significant Deterioration (PSD) program because potential facility-wide emissions are limited to less than the thresholds set forth in Section 3 of the general permit. Since the general permit establishes federally enforceable requirements, facilities covered under this general permit will be considered as “moderate” sources for PSD. Facilities granted coverage under the OPGP are also not subject to review under

Nonattainment New Source Review (NNSR) since there are currently no areas on Mississippi classified as nonattainment for any National Ambient Air Quality Standard (NAAQS).

d) State of Mississippi Regulations

Portions of the Mississippi Commission on Environmental Quality Air Regulations are potentially applicable to an eligible coverage recipient:

1) 11 Miss. Admin. Code Pt. 2, Ch. 1. - Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants (Adopted May 8, 1970; Last Amended November 20, 2014)

- 11 Miss. Admin. Code Pt. 2, R.1.3.A. – Opacity
- 11 Miss. Admin. Code Pt. 2, R.1.3.B. – Equivalent Opacity
- 11 Miss. Admin. Code Pt. 2, R.1.3.D(1)(a). – Filterable Particulate Matter (PM)
- 11 Miss. Admin. Code Pt. 2, R.1.3.D(1)(b). – Filterable PM
- 11 Miss. Admin. Code Pt. 2, R.1.4.A(1). – Sulfur Dioxide (SO_2)
- 11 Miss. Admin. Code Pt. 2, R.1.4.B(2). – Hydrogen Sulfide (H_2S)

2) 11 Miss. Admin. Code Pt. 2, Ch. 2. - Permit Regulations for the Construction and/or Operation of Air Emissions Equipment (Adopted May 8, 1970; Last Amended July 28, 2005).

Any fuel combustion equipment will be subject to State Standards for Opacity, PM, and SO_2. The units shall be limited to burning produced gas, propane, natural gas, and diesel. Since produced gas, propane, and natural gas are relatively clean burning fuels and due to federal regulations limiting the amount of sulfur in diesel, the units will have a large margin of compliance and will not approach the State Standards for Opacity, PM, and SO_2.

Any oil well producing a gas stream containing H_2S in excess of one (1) grain per 100 standard cubic feet is not eligible for this general permit. Further compliance

shall be demonstrated by routing all produced gas to the flare for control or to a pipeline for product recovery and/or sale.

VI. PUBLIC PARTICIPATION REQUIREMENTS TO BE COVERED

This OPGP is for the construction and operation of facilities that may be considered "moderate sources" for PSD purposes and "synthetic minor" sources for Title V purposes. Miss. Admin. Code Pt. 2, Rule 2.4.C. and 2.4.D established the public participation process for these types of sources. In order to seek coverage under the general permit, the proposed facility will be required to conduct the public participation process including publishing a notice in a newspaper of local distribution to notify the public of the 30-day comment period for the project and sending relative information to a library in the general area. An example of the Public Notice documentation will be included in the Forms Package.

The OPGP also requires the public participation process if the facility proposes to modify the source such that it's uncontrolled emissions as described in the Notice of Intent would increase. For those changes that do not increase the uncontrolled emission levels, the facility would only be required to report those changes to the MDEQ.