STATEMENT OF BASIS
SOUTHERN NATURAL GAS COMPANY, LLC
REFORM COMPRESSOR STATION
REFORM, PICKENS COUNTY, ALABAMA
FACILITY NO. 409-0009

This proposed Title V Major Source Operating Permit (MSOP) renewal has been developed in accordance with the provisions of ADEM Admin. Code chap. 335-3-16. The above-named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

The facility was originally constructed/began operations in 1947. The initial application for this renewal was received September 6, 2024, and the application was deemed complete on September 10, 2024. The initial MSOP was issued on March 10, 2000, and this is the fifth renewal. The current MSOP was issued on January 28, 2020, and became effective on March 10, 2020, and is scheduled to expire on March 9, 2025.

The facility is located in Pickens County, which is currently listed attainment/unclassifiable with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against Southern Natural Gas Company (SNGC) necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history for the facility can be found at https://echo.epa.gov/ (Search using Facility ID AL0000000107500009).

Facility Operations

Southern Natural Gas Company, LLC (SNGC) operates a compressor station for the transmission of pipeline natural gas. The significant sources of air pollutants at this facility are nine 1,350 hp Cooper-Bessemer GMV-10-STF, 2-stroke, lean-burn (2SLB) natural gas-fired reciprocating internal combustion engines (RICE) (Compressor Engine Nos. 8 – 16); one 800 hp Cooper-Bessemer GMV-8, 2SLB natural gas-fired RICE (Compressor Engine No. 17); three 3,000 hp Clark TLAD-8, 2SLB natural gas-fired RICE (Compressor Engine Nos. 18 – 20); and one 872 hp Caterpillar G399 4-stroke, rich-burn (4SRB) natural gas-fired emergency generator engine (Emergency Generator Engine No. 1). Insignificant emission sources at this station include one 9,500 gallon oil storage tank; one 9,000 gallon oil storage tank; two 1,500 gallon used oil storage tanks; one 4,500 gallon pipeline condensate tank; four electric air compressors; one 16 hp natural gas-fired air compressor; five space heaters; and water heaters.

Proposed Changes

There have been no modifications to or additions of significant emission sources at this facility since the issuance of the fourth renewal MSOP.

Permit History

The following is a history of previously issued permits for this facility:

Issuance No./Permit No.	Limit(s) Established	Issuance Date	Effective Date	Expiration Date	PSD SER Exceeded (Y/N)
Unpermitted - (16) 1,350 hp RICE & (1) 800 hp RICE (Grandfathered for PSD)	--	1947-1964	--	--	NA
AP X001 – X003 (3) 3000 hp RICE replace (7) 1,250 hp RICE	NO_x limits established for BACT	October 3, 1979	--	--	Y
Initial MSOP	--	March 10, 2000	March 10, 2000	March 9, 2005	--
MSOP 1st Renewal	--	February 4, 2005	March 10, 2005	March 9, 2010	--
MSOP 2nd Renewal - Rolled in Emer. Eng. G001	--	March 9, 2010	March 10, 2010	March 9, 2015	N
MSOP 3rd Renewal	--	June 9, 2015	June 9, 2015	March 9, 2020	--
MSOP 4th Renewal	--	January 28, 2020	March 10, 2020	March 9, 2025	--

Plant-Wide Potential to Emit (PTE)

Pollutant	Potential Emissions (TPY)
PM	46.27
SO_2	0.71
NO_x	5,085.37
CO	471.80
VOC	148.91
Formaldehyde (CAS No. 50-00-0)	55.43
CO_2e	117,631.92
Total HAP	82.95

Applicability: Federal Regulations

Title V

This facility is a major source under Title V regulations because the potential emissions for nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) each exceed the 100 TPY major source threshold. The facility is also a major source of Hazardous Air Pollutants (HAP) because individual HAP (formaldehyde, 55.43 TPY) potential emissions are

greater than 10 TPY and the total HAP potential emissions are greater than 25 TPY.

Prevention of Significant Deterioration (PSD)

This facility is located in an attainment area for all criteria pollutants, and the facility operations are not one of the 28 listed major sources categories; therefore, the applicable major source threshold is 250 TPY for criteria pollutants. The facility is a major source under PSD regulations because the facility-wide potential emissions for NO_x and CO each exceed 250 TPY. The three 3,000 hp Clark engines (Compressor Engine Nos. 18, 19, and 20) underwent PSD review prior to their installation in 1980 and are subject to applicable NO_x emission limitations of 56.22 lb/hr, each, which was established as Best Available Control Technology (BACT) when the units were initially permitted in 1979. The other engines at the facility were installed prior to the PSD applicability date and have not been modified since their installation and the emergency generator would not have any operating or emission limitations.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (Subpart JJJJ) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(88)]

Compressor Engine Nos. 8 - 20 and Emergency Generator Engine No. 1 at this facility are not subject to 40 CFR Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (Subpart JJJJ) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(88)] based on the date these engines were manufactured [Compressor Engine Nos. 8 and 9 (1947), Compressor Engine Nos. 10-16 (1948), Compressor Engine No. 17 (1964), Compressor Engine Nos. 18-20 (1980), and Emergency Generator Engine No. 1 (1982)], all of which are prior to each unit's applicability date of this Subpart.

40 CFR Part 60, 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 OOOO) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(91)]

The compressors associated with Compressor Engine Nos. 8 - 20 were installed prior to the August 23, 2011, applicability of Subpart OOOO; therefore, these units are not subject to this Subpart.

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 and On or Before December 6, 2022 (Subpart OOOOa) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(91)(a)]

All equipment and processes at this facility were installed or modified prior to the September 18, 2015 applicability date of Subpart OOOOa, therefore, this facility is not subject to this Subpart.

40 CFR Part 60, Subpart OOOOb, Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After December 6, 2022 (Subpart OOOOb)

All equipment and processes at this facility were installed or modified prior to the December 6,

2022, applicability date of Subpart OOOOb, therefore, this facility is not subject to this Subpart.

National Emission Standards for Hazardous Air Pollutants (NESHAP/MACT)

40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ) [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(103)]

This facility is a major source for HAPs and operates thirteen 2SLB natural gas-fired RICE (Compressor Engine Nos. 8 - 20) that were installed between 1947 and 1980. Each of these units are affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ) [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(103)]. In accordance with 40 CFR §63.6590(b)(3)(i), existing 2-stroke lean-burn engines greater than 500 hp located at a major source of HAP do not have to meet the requirements of Subpart ZZZZ and Subpart A. Emergency Generator Engine No. 1 is also an affected source under Subpart ZZZZ. In accordance with 40 CFR §63.6590(b)(3)(iii), existing emergency engines greater than 500 hp located at a major source of HAP do not have to meet the requirements of Subpart ZZZZ and Subpart A. An initial notification is also not required for these engines. Therefore, although these engines are not excluded from the applicability of Subpart ZZZZ, there would be no applicable requirements.

Mandatory Greenhouse Gas Reporting

40 CFR Part 98, Subpart A General Provision

This facility is a listed source category as defined in 40 CFR §98.2(a)(1) or (2), and it is potentially subject to this rule in accordance with 40 CFR §98.2(a)(4) since the aggregate maximum rated heat input capacity of the stationary fuel combustion units at the facility is 30 MMBtu/hr or greater and the facility has the potential to emit 25,000 metric tons (27,558 TPY) of CO_2e or more per year from all stationary fuel combustion sources combined. SNGC must calculate greenhouse gas quantities according to the methodologies described in 40 CFR §98.2(c). SNGC would be required to maintain records of actual CO_2, CH_4, and N_2O emissions to determine the actual CO_2e emissions. If such emissions exceed the 25,000 metric tons per year threshold, then an annual report must be submitted no later than March 31 of each calendar year thereafter per 40 CFR §98.3. In accordance with 40 CFR §98.5, the annual report must be submitted electronically in accordance with the requirements of 40 CFR §98.4 (via EPA's Central Data Exchange). While this facility is required to report greenhouse gas emissions to EPA per 40 CFR Part 98, these requirements do not meet the definition of "applicable requirements" under 40 CFR 70.2 and ADEM Admin. Code r. 335-3-16-.01(1)(e). Therefore, the requirements of 40 CFR Part 98 are not required to be included in the Title V permit.

Applicability: State Regulations

ADEM Admin. Code r. 335-3-4-.01, "Control of Particulate Emissions: Visible Emissions"

Compressor Engine Nos. 8 - 20 and Emergency Generator Engine No. 1 are each subject to the State visible emissions standards of ADEM Admin. Code r. 335-3-4-.01(1), which states that no air emission source may emit particulate of an opacity greater than 20% (as measured by a six-minute average) more than once during any 60 minute period and at no time shall emit particulate of an opacity greater than 40% (as measured by a six-minute average).

ADEM Admin. Code r. 335-3-4-.02, "Fugitive Dust and Fugitive Emissions"

This rule is applicable. However, all plant roads are paved or graveled. There are no raw materials, storage piles, products, etc. capable of generating fugitive dust at this facility. Therefore, additional specific requirements for fugitive dust are not necessary for this facility.

ADEM Admin. Code r. 335-3-4-.03, "Control of Particulate Emissions: Fuel Burning Equipment"

Although Compressor Engine Nos. 8 - 20 and Emergency Generator Engine No. 1 are fuel combustion sources, they are not subject to any particulate matter (as TSP) emission limitation of ADEM Admin. Code Chap. 335-3-4 because they do not meet the definition of fuel burning equipment and the facility is not considered one of the process industries, general or specific.

ADEM Admin. Code r. 335-3-5-.01, "Control of Sulfur Compound Emissions: Fuel Combustion"

Although Compressor Engine Nos. 8 - 20 and Emergency Generator Engine No. 1 are fuel combustion sources, they are not subject to any sulfur dioxide (SO_2) emission limitation of ADEM Admin. Code Chap. 335-3-5 because they do not meet the definition of fuel burning equipment nor is this facility considered one of the process industries, general or specific.

Emission Testing and Monitoring

SNGC would be required to certify on a semiannual basis that only natural gas was burned in the reciprocating engines as a method for monitoring compliance with the visible emission requirements of ADEM Admin. Code r. 335-3-4-.01(1) because opacity would be negligible while combusting natural gas.

To demonstrate compliance with the applicable BACT limits for NO_x for Compressor Engine Nos. 18, 19, and 20, emissions testing would be required twice per calendar year at a frequency of once per semiannual period (Jan 1st – Jun 30th and Jul 1st – Dec 31st), with a minimum of three (3) calendar months elapsing between tests. The first emissions testing conducted following the effective date of this renewal permit must be conducted using the appropriate EPA Reference Method. Emission testing for the remainder of the permit term may be conducted using either the appropriate EPA Reference Method or an alternate method with a portable analyzer if approved in advance by the Air Division.

No emission testing is required for the Emergency Generator Engine No. 1.

Recordkeeping and Reporting

As part of the Semiannual Monitoring Report, SNGC is required to include a statement addressing whether only natural gas was fired in each unit during the respective reporting period as a method for monitoring compliance with the visible emission requirements of ADEM Admin. Code r. 335-3-4-.01(1). SNGC is required to submit the results of all emission tests conducted to the Air Division within 30 days of the actual completion of the test**,** unless stated otherwise in an applicable regulation.

SNGC is required to record the hours of operation for the Emergency Generator Engine No. 1 on a calendar year basis to demonstrate that SNGC operates the engine as an emergency stationary RICE as specified by 40 CFR §63.6640(f). These records are required to be maintained in a permanent form suitable for inspection and be made available upon request.

In accordance with ADEM Admin. Code r. 335-3-16-.05(c)2(ii), all required records must be maintained in a permanent form suitable for inspection for a period of five years from the date of generation of each record and be made available upon request.

Compliance Assurance Monitoring (CAM)

Compliance Assurance Monitoring (CAM), 40 CFR Part 64, applies to any pollutant-specific emission unit at a major source that is required to obtain an operating permit, in accordance with 40 CFR §64.5, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY of a criteria pollutant, 10 TPY of an individual HAP, or 25 TPY of total HAP.

Compressor Engine Nos. 7, 9, 10, and 11 do not use an active control device as defined in the CAM regulations to meet the applicable emission limitations. As such, the facility is not subject to CAM requirements.

Public Participation

The renewal of this Title V MSOP would require a 30-day public comment period and a 45-day EPA review period.

Recommendation

Based on the above analysis, I recommend that Southern Natural Gas Company, LLC's Title V Major Source Operating Permit (409-0009) be renewed with the requirements noted above pending the resolution of any comments received during a 30-day public comment period and 45-day EPA review.

Brandon Cranford

Brandon R. Cranford
Chemical Branch
Air Division

March 13, 2025
Date

11396 409-0009 107 03-13-2025 T5SOB BRC 5REN