STATEMENT OF BASIS
SOUTHERN NATURAL GAS COMPANY, LLC
SELMA COMPRESSOR STATION
SELMA, DALLAS COUNTY, ALABAMA
FACILITY NO. 104-0021

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 1965. The initial application for this renewal was received September 6, 2024, and the application was deemed complete on September 15, 2024. The initial MSOP was issued on March 10, 1999, and this is the fifth renewal. The current MSOP was issued on January 9, 2020, became effective on March 10, 2020, and is scheduled to expire on March 9, 2025.

The facility is located in Dallas 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, LLC (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 AL0000000104700021).

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 two 9,160 hp GE MS-3002G natural gas-fired combustion turbines (Compressor Turbine Nos. 1 and 2) and two 260 hp Kohler 135R ZD, 4-stroke, rich-burn (4SRB) natural gas-fired reciprocating internal combustion engines (RICE) powering emergency generators (Emergency Generator Nos. 1 and 2). Insignificant emission sources at this station include one storage tank used for new oil (<5,000 gallons), two storage tanks used for used oil (<5,000 gallons each), one pipeline condensate tank (<5,000 gallons), one natural gas-fired fuel gas heater (1.5 MMBtu/hr), space heaters (<0.5 MMBtu/hr), two electric air compressors, 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 Selma Compressor Station was originally constructed/began operation in 1965. At that time SNGC installed two 6,500 hp GE model MS3002G natural gas fired turbines which are considered "grandfathered" under PSD regulations. These units were later upgraded to 9,160 hp each.

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

Issuance No./Permit No.	Issuance Date	Effective Date	Expiration Date	Amendments/ Modifications (Where Applicable)	PSD Significant Emission Rates Exceeded (Y/N)
N001 - 6,500 hp Turbine	1965 (Unpermitted)	--	--	--	N
N002 - 6,500 hp Turbine	1966 (Unpermitted)	--	--	--	N
AP X001 - Modified 6,500 hp to 9,160 hp. NO_x limits established for BACT	December 4, 1996	--	--	--	Y
AP X002 - modified 6,500 hp to 9,160 hp. NO_x limits established for BACT	December 4, 1996	--	--	--	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 -	January 26, 2010	March 10, 2010	March 9, 2015	--	N
MSOP 3rd Renewal - Added Emergency Engines 003 and 004	May 29, 2015	May 29, 2015	March 9, 2020	--	--
MSOP 4th Renewal	January 9, 2020	March 10, 2020	March 9, 2025	--	--

Plant-Wide Potential to Emit (PTE)

Pollutant	Potential Emissions (TPY)
PM	6.30
SO_2	3.20
NO_x	465.10
CO	79.50
VOC	16.00
CO_2e	103,961.00
Formaldehyde	0.57
HAP ≥ 10 TPY (by CAS)	N/A

Applicability: Federal Regulations

Title V

This facility is a major source under Title V regulations because the potential emissions for nitrogen oxides (NO_x) exceed the 100 TPY major source threshold. It is not a major source of Hazardous Air Pollutants (HAP) because individual HAP potential emissions are less than 10 TPY, and the total HAP potential emissions are less 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 source 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 NO_x emissions exceed 250 TPY. Compressor Turbine Nos. 1 and 2 are each subject to a synthetic minor NO_x emission limit of 53.0 lb/hr that was established when each unit's brake horsepower was increased from 6,500 hp to 9,160 hp in 1996.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (Subpart GG) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(33)]

Although Compressor Turbine Nos. 1 and 2 were initially installed in 1965, they were modified in 1996, and each unit has a heat input at peak load equal to or greater than 10 MMBtu/hr. Therefore, each of these units became subject to 40 CFR Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(33)]. Performance testing in accordance with 40 CFR §60.335 has demonstrated the turbines are able to comply with the applicable NO_x emission standard (110 ppmvd at 15% O_2) as required by 40 CFR §60.332(a)(2). In order to demonstrate compliance with the applicable SO_2 emission standard (150 ppmvd at 15% O_2) as required by 40 CFR §60.333, SNGC utilizes an approved custom monitoring schedule for monitoring the sulfur content of the fuel as specified in 40 CFR §60.334(h)(4).

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)]

The two 260 hp natural gas-fired emergency engines (Emergency Generator Engine Nos. 1 and 2) are not subject to Subpart JJJJ, because these engines were each manufactured in 1995, which is prior to the applicability date of this Subpart.

40 CFR Part 60, Subpart KKKK, Standards of Performance for Stationary Combustion Turbines (Subpart KKKK) [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(89)]

This subpart applies to stationary gas turbines with a heat input at a peak load equal to or greater than 10 MMBtu/hr and have a commenced construction, modification, or reconstruction after February 18, 2005. This regulation is not applicable to Compressor Turbin Nos. 1 and 2 because both units were installed and modified prior to 2005.

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 Turbine Nos. 1 and 2 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 YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines (Subpart YYYY) [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(102)]

This facility is not a major source for HAP; therefore, the combustion turbines are not affected sources under Subpart YYYY.

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)]

Emergency Generator Engine Nos. 1 and 2 are each considered affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ), which applies to both major and area sources of HAP emissions. Emergency Generator Engine Nos. 1 and 2 are each considered an existing emergency, four-stroke, rich-burn (4SRB), spark ignition (SI), natural gas-fired RICE less than 500 hp located at an area source of HAP emissions.

Compliance Requirements

In accordance 40 CFR §63.6603 and Item No. 5 of Table 2d to Subpart ZZZZ, SNGC is required to perform the following work practice requirements for Emergency Generator Engine Nos. 1 and 2:

- Change oil and filter every 500 hours of operation or within 1 year plus 30 days of the previous change, whichever comes first, or utilize an oil analysis program;
- Inspect spark plugs every 1,000 hours of operation or within 1 year plus 30 days of the previous inspection, whichever comes first, and replace as necessary; and

- Inspect all hoses and belts every 500 hours of operation or within 1 year plus 30 days of the previous inspection, whichever comes first, and replace as necessary.

In accordance with 40 CFR §63.6640(f), to retain the emergency classification, these two engines are each limited to operating during:

- Emergency situations;
- Maintenance checks and readiness testing, not to exceed 100 hours per year; and
- Non-emergency situations, not to exceed 50 hours per year (those 50 hours are counted towards the 100 hours per year provided for maintenance and testing).

In accordance with 40 CFR §63.6625(e)(3) and Item 9 of Table 6 to Subpart ZZZZ, SNGC is required to operate and maintain Emergency Generator Engine Nos. 1 and 2 according to the manufacturer's emission related operation and maintenance instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions. 40 CFR §63.6625(f) requires the installation of a non-resettable hour meter on each engine if one is not already installed.

Testing Requirements

There are no emission testing requirements for the two emergency RICE.

SNGC is required to report to the Air Division any failure to perform any required work practice on, including instances when the work practice standard was not performed due to emergency operation or unacceptable risk under a federal, state, or local law. SNGC would be required to submit the report within two working days of the deviation and provide an explanation as to why the work practice requirement was not performed. In addition, SNGC is required to certify on a semiannual basis that only natural gas was burned in these units.

Mandatory Greenhouse Gas Reporting

40 CFR Part 98, Subpart A General Provision

Although this facility is not subject to a listed source category as defined in 40 CFR §98.2(a)(1) or (2), it is potentially subject to this rule in accordance with 40 CFR §98.2(a)(3) 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"

The turbines and emergency engines 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 the turbines and emergency engines 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 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 the turbines and emergency engines 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 is required to certify on a semiannual basis that only natural gas was burned in the two turbines and two emergency stationary RICE as a method for monitoring compliance with the visible emission requirements of ADEM Admin. Code r. 335-3-4-.01(1) since opacity would be expected to be negligible while combusting natural gas.

To monitor compliance with the applicable ozone season NO_x emission limits and the synthetic minor NO_x emission limits of 53.0 lb/hr for Compressor Turbine Nos. 1 and 2, each unit is required to conduct emissions testing for NO_x once per peak season (October – March) and once per off-peak season (April – September). However, if the operating time for a turbine during the off-peak season does not exceed 250 hours, then emission testing would not be required for that turbine during that season. The first emission testing conducted following the effective date of this renewal permit must be conducted using an appropriate EPA Reference Method. Emission testing for the remainder of the permit term may be conducted using either an appropriate EPA Reference Method or an alternate method approved in advance by the Air Division.

Performance testing in accordance with 40 CFR §60.335 has demonstrated the turbines are able to comply with the applicable NO_x emission standard (110 ppmvd at 15% O_2) as required by 40 CFR §60.332(a)(2). To demonstrate compliance with the SO_2 standard of 40 CFR Part 60, Subpart GG,

SNGC must monitor compliance with the applicable SO_2 standard in accordance with at least one of the options specified in 40 CFR §60.334.

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. SNGC is also required to maintain records of the fuel sulfur content on-site in a form suitable for inspection. In addition, 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.

In addition to certifying that only natural gas was fired in the two emergency stationary RICE, SNGC is required to record the hours of operation for Emergency Generator Engine Nos. 1 and 2 on a monthly and calendar year total to ensure these engines are operated as emergency stationary RICE as specified by 40 CFR §63.6640(f). In addition, SNGC must report to the Air Division any failure to perform a work practice on the scheduled required. The report must be submitted within two working days of the deviation. These records must be maintained in a permanent form suitable for inspection 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 Turbine Nos. 1 and 2 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 the renewal Major Source Operating Permit (104-0021) be issued with the requirements above pending resolution of any comments received during a 30-day public comment and a 45-day EPA review.

Brandon Cranford

Brandon R. Cranford
Chemical Branch

Air Division

January 30, 2025
Date

11399 104-0021 047 01-30-2025 T5SOB BRC 5REN