

STATEMENT OF BASIS

Southern Natural Gas Company, LLC
Auburn Compressor Station
Auburn, Lee County, Alabama
Facility No. 206-0021

This draft Title V Major Source Operating Permit (MSOP) 4th renewal is issued under the provisions of ADEM Admin. Code r. 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 current MSOP was issued on March 17, 2015, and is scheduled to expire on December 27, 2019. There have been no modifications to or additions of significant emission sources at this facility since the issuance of the 3rd renewal MSOP.

Southern Natural Gas Company (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 4-stroke, rich-burn (4SRB) natural gas-fired emergency engines. Insignificant emission sources at this station include one 4,905 gallon lube oil storage tank, one 2,068 gallon lube oil storage tank, one 3,000 gallon pipeline condensate tank, one 500 oily water tank, one 500 gallon used oil tank, one 55 gallon drum used for storage and handling of engine coolant, two stationary electric air compressor engines, one portable air compressor, one potable water pump, one natural gas-fired fuel heater (3 MMBtu/hr), three portable handheld generators, and one space heaters (<0.5 MMBtu/hr).

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 for PSD because the facility-wide potential NO_x emissions exceed 250 TPY. However, there have not been any modifications at this facility that would trigger a PSD review. The two turbines underwent PSD review when their brake horsepower was increased in 1998, and each is limited to 53.0 lb/hr of NO_x.

NSPS

Compressor Turbine Nos. 1 and 2 were installed after the New Source Performance Standards-Subpart GG, applicability date of October 3, 1977; therefore, they are subject to 40 CFR Part 60,

Subpart GG-Standards for Stationary Gas Turbines [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(33)] and have applicable NO_x and SO₂ emission limits. Performance testing has determined that the turbines are able to comply with the applicable NO_x standard. In order to determine compliance with the standard for SO₂, SNGC utilizes an approved custom monitoring schedule for monitoring the sulfur content of the fuel.

The two 260 hp natural gas-fired emergency engines at this facility are not subject to 40 CFR 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(88)] based on the date that these engines were manufactured (1998).

The compressors associated with Compressor Turbine Nos. 1 and 2 were installed prior to the August 23, 2011, applicability of 40 CFR Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distributions [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(91)]; therefore, these units are not subject to this subpart.

The Auburn Compressor Station is considered a natural gas compressor facility and is potentially subject to 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 [Adopted by reference in ADEM Admin. Code r. 335-3-10-.02(91)(a)]. However, all equipment and processes potentially subject to this regulation were installed and modified prior to the applicability date, therefore, this facility is not subject to this subpart.

NESHAP Part 63

This facility is not a major source for HAP; therefore, the combustion turbines are not affected sources under 40 CFR 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(102)].

The two 260 hp natural gas-fired emergency engines are existing affected sources under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). As an existing emergency spark ignition (SI) stationary RICE <500 hp located at an area source of HAP emissions, these engines would be subject to the work practice requirements which include:

- Change oil and filter every 500 hours of operation or annually, whichever comes first;
- Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

In addition, these engines would be 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).

Applicability: State Regulations

Although the turbines and the emergency engines at the facility are fuel combustion sources, they are not subject to any particulate matter (as TSP) emission limitation of ADEM Admin. Code chap. 335-3-4 or any sulfur dioxide (SO₂) emission limitation of ADEM Admin. Code chap. 335-3-5 because they do not meet the definition of fuel burning equipment nor is the facility considered one of the process industries, general or specific. The turbines and the emergency engines would, however, be subject to the visible emissions requirements of ADEM Admin. Code r. 335-3-4-.01(1). Because the turbines and the emergency engines would be fired exclusively with natural gas and opacity would be negligible while combusting this fuel, they would be expected to be able to comply with this standard.

Emission Testing and Monitoring

SNGC would be required to certify on a semiannual basis that only natural gas was burned in the two turbines and the two emergency engines 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.

Monitoring proposed for Combustion Turbine Nos. 1 and 2 would be 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 no emission testing would be required for that turbine during that season. The first emission testing conducted following the effective date of this renewal permit shall 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 if approved in advance by the Air Division.

To monitor compliance with the SO₂ standard of 40 CFR Part 60, Subpart GG, SNGC shall monitor compliance with the applicable SO₂ standard in accordance with at least one of the options specified in 40 CFR §60.334.

No emission testing would be required for the two 260 hp emergency engines.

Compliance Assurance Monitoring (CAM)

Compressor Turbine Nos. 1 and 2 does not use an active control device as defined in the CAM regulations to meet the applicable emission standards. As such, the facility is not subject to CAM requirements.

Recordkeeping and Reporting

As part of the Semiannual Monitoring Report, SNGC would be required to include a statement addressing whether only natural gas was fired in each unit during the respective reporting period. SNGC would also be required to maintain records of the fuel sulfur content on-site in a form suitable for inspection.

In addition to certifying that only natural gas was fired in the emergency engines, SNGC would be required to record the hours of operation for these units on a monthly and 12-month rolling total basis to ensure that the permittee operates this engine as an emergency stationary RICE as indicated by 40 CFR §63.6640(f). In addition, SNGC shall report to the Air Division any failure to perform a work practice on the schedule required. The report shall be submitted within two working days of the deviation. These records would be required to be maintained in a permanent form suitable for inspection and be made available upon request.

Recommendation

Based on the above analysis, I recommend that the renewal Major Source Operating Permit (206-0021) 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 R. Cranford
Chemical Branch
Air Division

September 13, 2019
Date

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