

## STATEMENT OF BASIS

Southern Natural Gas Company  
Pell City Compressor Station  
Pell City, St. Clair County, Alabama  
Facility No. 410-0014

This draft Title V Major Source Operating Permit (MSOP) 4<sup>th</sup> 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 originally issued on April 15, 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 3<sup>rd</sup> 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 one 4,390 hp Solar Centaur T4500 natural gas-fired combustion turbine (Compressor Turbine No. 1) and one 320 hp natural gas-fired emergency engine (Emergency Generator No. 1). Insignificant emission sources at this station include one 420 gallon degassing tank, one 3,612 gallon pipeline condensate storage tank, one 30 gallon parts washer, portable electric air compressor, hot water heaters, one 2,000 gallon pipeline condensate storage tank, natural gas-fired heaters (<0.5 MMBtu/hr) and space heaters (<0.5 MMBtu/hr).

### **Applicability: Federal Regulations**

#### Title V

This facility is considered a major source under Title V regulations because the potential emissions for nitrogen oxides (NO<sub>x</sub>) exceeds 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; therefore, the applicable major source threshold is 250 TPY for criteria pollutants. The facility is not a major source for PSD because the facility-wide potential emissions for all criteria pollutants are below 250 TPY.

#### NSPS

Compressor Turbine No. 1 was installed after the New Source Performance Standards 40 CFR Part 60, Subpart GG, applicability date of October 3, 1977; therefore, it is 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 has applicable NO<sub>x</sub> and SO<sub>2</sub> emission limits. Performance testing has determined that the turbine is able to comply with the NO<sub>x</sub> standard. In order to determine compliance with the standard for SO<sub>2</sub>, SNGC utilizes an approved custom monitoring schedule for monitoring the sulfur content of the fuel.

The natural gas-fired emergency engine at this facility is not subject to 40 CFR Part 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 this engine was manufactured (1990).

The compressor associated with Compressor Turbine No. 4 was 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, this unit is not subject to this subpart.

The Pell City 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 turbine is not an affected source under 40 CFR Part 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 320 hp natural gas-fired emergency engine is an affected source under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the RICE MACT). As an existing emergency spark ignition (SI) stationary RICE <500 hp located at an area source of HAP emissions, this engine would be subject to 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, this engine 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 turbine and the emergency engine 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 (SO<sub>2</sub>) 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 turbine and the emergency engine would, however, be subject to the visible emissions requirements of ADEM Admin. Code r. 335-3-4-.01(1). Because the turbine and the emergency engine would be fired exclusively with natural gas, 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 turbine and the emergency generator 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 negligible while combusting natural gas.

The turbine has an applicable NO<sub>x</sub> emission standard under 40 CFR Part 60, Subpart GG, and SNGC would be required to conduct a performance test to determine compliance with this standard within 120 days of the effective date of this renewal permit, unless an extension of time is specifically approved by the Air Division.

To monitor compliance with the SO<sub>2</sub> standard of 40 CFR Part 60, Subpart GG, SNGC would be required to monitor the sulfur content of the fuel on the custom monitoring schedule approved by the EPA.

No emission testing would be required for the 320 hp emergency engine.

### **Compliance Assurance Monitoring (CAM)**

Compressor Turbine No. 1 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 engine, SNGC would be required to record the hours of operation for this unit on a monthly and 12-month rolling total basis to ensure that the permittee operates this engine as an emergency stationary RICE as specified by §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 (410-0014) be issued with the requirements above pending resolution of any comments received during a 30-day public comment period and a 45-day EPA review.



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Brandon R. Cranford  
Chemical Branch  
Air Division

September 16, 2019  
Date

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