Facility Name: **Kinder Morgan Inc – Southern Natural Gas, LLC – Albany Compressor Station**
City: Albany
County: Dougherty
AIRS #: 04-13-09500085

Application #: TV-659470
Date Application Received: May 25, 2022
Permit No: 4922-095-0085-V-06-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name:

   Southern Natural Gas Company, L.L.C. – Albany Compressor Station

2. Parent/Holding Company Name

   Kinder Morgan Inc.

3. Previous and/or Other Name(s)

   Southern Natural Gas Company – Albany Compressor Station

4. Facility Location

   1610 Liberty Expressway, S.E.
   Albany, Georgia 31705

5. Attainment, Non-attainment Area Location, or Contributing Area

   Southern Natural Gas Company, L.L.C. - Albany Compressor Station is located in Dougherty County, which is considered to be in "attainment" or “unclassifiable” for all criteria air pollutants.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
4922-095-0085-S-05-0	December 7, 2017	Initial Title V Permit

D. Process Description

1. SIC Codes(s)

4922

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The facility does not manufacture any product. It is a natural gas compressor station.

3. Overall Facility Process Description

Southern Natural Gas Company, L.L.C. operates several compressor stations in South Georgia and adjacent states. These compressor stations, also referred to as pump stations or boost stations, are located along the Southern Natural Gas transmission line. The operation of Southern Natural Gas Company, L.L.C. – Albany Compressor Station (hereinafter "facility") is primarily designed to transport natural gas along the pipeline by receiving low-pressure inlet natural gas and compressing the gas to increase pressure in the pipeline and maintain the downstream flow. The natural gas compression at the Albany Compressor Station is achieved by two compressor turbines (Equipment ID Nos. C001 and C003) and one compressor engine (Equipment ID No. C002). The facility also operates an emergency generator (Equipment ID No. G001, powered by a natural gas fired engine). Note that the proposed permit does not include G001 because, per Georgia Rules for Air Quality Control 391-3-1-.03(6)(b)11., emergency generators are exempt from permitting.

As part of the normal operation of the Albany Compressor Station, Southern Natural Gas Company-Albany Compressor Station (SNG) routinely conducts activities associated with the maintenance and repair of turbines, engines, and other equipment at the facility. Such activities associated with maintenance and repair include, but are not limited to, start-ups and shutdowns, upsets, and emergencies. Some of these activities result in release of natural gas (blowdown).

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

Southern Natural Gas Company-Albany Compressor Station is not a major source with regards to the New Source Review (NSR) Prevention of Significant Deterioration of Air Quality (PSD) Regulations. The facility is not a major source because the potential to emit (PTE) of carbon monoxide, NOx, and all other criteria pollutants are not greater than the PSD major source threshold of 250 tons per year (ton/yr).

Note: The transmission of natural gas is not one of the 28 named categories whose major source threshold is 100 ton/yr.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes			✓
PM_{10}	Yes			✓
$PM_{2.5}$	Yes			✓
SO_2	Yes			✓
VOC	Yes			✓
NO_x	Yes	✓		
CO	Yes			✓
TRS	Yes			✓
H_2S	Yes			✓
Individual HAP	Yes			✓
Total HAPs	Yes			✓

3. MACT Standards

The facility is not a major source of hazardous air pollutants (HAPs) because it does not emit or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAPs at a rate of 25 tons or more per year. However, the facility is subject to an area MACT standard, 40 CFR 63 Subpart ZZZZ for Waukesha Compressor Engine (Emission Unit ID No. C002).

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	n
Program Code 8 – Part 61 NESHAP	n
Program Code 9 - NSPS	y
Program Code M – Part 63 NESHAP	y
Program Code V – Title V	y

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

None applicable.

C. Compliance Status

None applicable.

D. Permit Conditions

None applicable.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
C001	No. 1 Compressor Turbine Solar Saturn T-1300 Input: 18.63 MMBtu/hr Output: 1,340 Hp Installed in 1966	GA Rule 391-3-1-.02(2)(b)1. GA Rule 391-3-1-.02(2)(g)2.	None	None
C002	Waukesha Compressor Engine Waukesha 7042GSIU (4-SRB) Input: 10.9 MMBtu/hr Output: 1,232 Hp Installed in 1982	40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ GA Rule 391-3-1-.02(2)(b)1. GA Rule 391-3-1-.02(2)(g)2.	NSCR	Nonselective catalytic reduction system
C003	No. 2 Compressor Turbine Solar Saturn T-1300 Input: 18.63 MMBtu/hr Output: 1,340 Hp Installed in 1993	40 CFR 60, Subpart A 40 CFR 60, Subpart GG GA Rule 391-3-1-.02(2)(b)1. GA Rule 391-3-1-.02(2)(g)2.	None	None

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

B. Equipment & Rule Applicability

40 CFR 60 Subpart GG – Standards of Performance for Stationary Gas Turbines

According to 40 CFR 60.330(a) and (b), 40 CFR 60 Subpart GG applies to all stationery gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, and commences construction, modification, or reconstruction after October 3, 1977. Since No. 1 Compressor Turbine (Equipment Unit ID No. C001) was installed prior to October 3, 1977, it is not subject to 40 CFR 60 Subpart GG. No. 2 Compressor Turbine (ID No. C003) is subject to 40 CFR 60 Subpart GG because it was installed after October 3, 1977 and has a capacity over 10 MMBtu/hr.

Since No. 2 Compressor Turbine (ID No. C003)'s capacity is between 10 and 100 MMBtu/hr, and is less than 30 MW, per 40 CFR 60.332(c) and (d), No. 2 Compressor Turbine (Equipment Unit ID No. C003) is subject to the NOx emission standard specified in 40 CFR 60.332(a)(2) as follows.

$STD = 0.0150 (14.4/Y) + F$

where: STD = allowable NOx emissions (% volume @ 15% O_2, dry)
Y = heat rate in kilojoules per watt hour; The value of Y shall not exceed 14.4 kilojoules per watt hour,
F = fuel bound nitrogen allowance

C003 Output Capacity = (1,340 Hp) * (0.0007457 MW/Hp) = 0.999 MW

Y = (18,630,000 Btu/hour) * (1.0548 kilojoules/Btu) / (999,000 watt)
= 19.67 kilojoules/watt-hour

Since Y cannot exceed 14.4 kilojoules/watt-hour, so 14.4 kilojoules/watt-hour is used in the equation in 40 CFR 60.332(a)(2). The value of F is assumed to be 0 for natural gas.

STD = 0.0150 * (14.4/14.4) + 0
= 0.0150% volume at 15% O_2
= 150 ppmv at 15% O_2

Using the equations listed in 40 CFR 60 Appendix A Method 19, as shown below, the 150 ppmv NOx at 15% O_2, is equivalent to 0.553 lb/MMBtu:

$E = Cd * Fd * 20.9 / (20.9 - \%O_2)$ Eq. 19-1

E = Mass Emission Rate of Pollutant (lb/MM Btu)
Cd = Pollutant Concentration (lb/scf or ppm)
Conversion Factor from ppm to lb/scf for NOx = $1.194 * 10^{-7}$
Fd = 8,710 dscf / MM Btu (for natural gas)
$\%O_2$ = 15 percent

E = (150 ppmvd) * (8,710 dscf / MM Btu) * ($1.194 * 10^{-7}$ lb/scf-ppmvd) * 20.9 / (20.9 – 15)
= 0.553 lb/MMbtu

At 18.63 MMBtu/hr, the 0.553-lb/MMBtu NOx emission standard is 10.3 lbs NOx/hr. The NOx emission standard in Condition 3.2.1 of **old** Title V Permit No. 4922-095-0085-V-03-0, 5.02 lbs NOx/hr, is more stringent than the 40 CFR 60 Subpart GG NOx emission standard. The 5.02-lbs NOx/hr limit is for permit fee reduction. The facility will retain the previous NOx emission standard of 5.02 lbs NOx/hr, per discussion with Wayne Parrott on May 30, 2017.

The facility conducted NOx performance testing at multiple engine loading levels on January 19, 2011 and demonstrated compliance with the more stringent 5.02-lbs/hr NOx emission limit. Therefore, the Title V permit does not include any additional NOx performance requirements. Only when the facility replaces C003's gas generator assembly and/or the combustion can, will it be subject to the re-test requirements specified in Condition 4.2.1. Per 40 CFR 60.334(c), the facility must continue the monitoring of the combustor outlet temperature (T5 temperature) to ensure compliance with the 40 CFR 60 Subpart GG NOx emission standard.

According to 40 CFR 60.333(b), the facility must not fire any fuel which contains total sulfur in excess of 0.8 percent by weight in C003. This fuel requirement is included in Condition 3.2.2. In order to demonstrate compliance with this fuel sulfur content limit, Condition 5.2.2 requires that the facility perform a semiannual analysis of the natural gas fired in C003 or follow the alternative requirements specified in 40 CFR 60.334(h)(3) or (4).

40 CFR 60.331(t) defines the following excess emissions that are included in Condition 6.1.7a.i.:

(1) Any fuel sulfur content analysis result that is greater than 0.8 percent.

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Per 40 CFR 60.4230(a)(4)(i), the compressor engine (ID No. C002) was constructed and manufactured before the associated applicable date; it is not subject to 40 CFR 60 Subpart JJJJ.

Per 40 CFR 60.4230(a)(4)(iv), the emergency generator engine (ID No. G001) was constructed and manufactured after the associated applicable date; it is subject to 40 CFR 60 Subpart JJJJ. The Emergency Generator Engine (ID No. G001) has an EPA certified engine for 40 CFR 60 Subpart JJJJ and has met the requirements of this subpart.

40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines

Per 40 CFR 60.4300, the compressor turbines (ID Nos. C001 and C003) were both constructed before February 18, 2005; they are not subject to 40 CFR 60 Subpart KKKK.

40 CFR 63 Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

According to 40 CFR 63.6080, 40 CFR 63 Subpart YYYY applies to stationary combustion turbines at HAP major sources. According to Table 8 of the narrative, the facility is minor for single and combined HAP emissions. Therefore, the compressor turbines (ID Nos. C001 and C003) are not subject to 40 CFR 63 Subpart YYYY.

40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

As discussed previously, the facility is an area source for HAP emissions; per 40 CFR 63.6580 and 63.6585, the Waukesha Compressor Engine (Equipment ID No. C002) and Emergency Generator Engine (ID No. G001) are subject to 40 CFR 63 Subpart ZZZZ. Since Equipment ID No. C002 was constructed before June 12, 2006, per 40 CFR 63.6590(a)(1)(iii), the engine is an existing reciprocating internal combustion engines (RICE) and G001 is a new reciprocating internal combustion engine (RICE). According to 40 CFR 63.6595(a)(1), Equipment ID No. C002 is in compliance now.

The startup of Emergency Generator Engine (ID No. G001) on December 23, 2022 (after January 18, 2008), is a new RICE, and Emergency Generator Engine (ID No. G001) must comply with the applicable emission limitations and operating limitations in this subpart upon startup. The Emergency Generator Engine (ID No. G001) is EPA certified engine for 40 CFR 60 Subpart JJJJ and has met the requirements of this subpart, since meeting the requirements of 40 CFR 60 Subpart JJJJ meets the requirements of 40 CFR 63 Subpart ZZZZ.

Note that Emergency Generator Engine (ID No. G001) is exempt from permitting due to Georgia Rules for Air Quality Control 391-3-1-.03(6)(b)11.

Since Emergency Generator Engine (ID No. G001) is not subject to any numeric emission standard, including those of 40 CFR 63 Subpart ZZZZ, it is not included in the Title V permit. The applicable 40

CFR 63 Subpart ZZZZ provisions for Emergency Generator Engine (ID No. G001) are 40 CFR 63.6590(c), 40 CFR 63.6595(a)7 and (c), 40 CFR 63.6605(a) and (b), 40 CFR 63.6625(h), 63.6640(f), and 63.6650(h).

The applicable 40 CFR 63 Subpart ZZZZ provisions for Waukesha Compressor Engine (Equipment ID No. C002) are discussed below:

- Per 40 CFR 63.6603(a) and Item 12 of Table 2d, the facility must install a nonselective catalytic reduction (NSCR) system to reduce HAP emissions from the Waukesha Compressor Engine (Equipment ID No. C002). Per 40 CFR 63.6605(a) and (b), the facility shall operate the NSCR system at all times during the operation of the Waukesha Compressor Engine (Equipment ID No. C002), in a manner consistent with safety and good air pollution control practices for minimizing emissions. Note, per Table 2d to 40 CFR 63 Subpart ZZZZ, the three emission limitations in Item 15.a.ii. of Table 6 apply at all times except during periods of startup, shutdown, and malfunction. These are included in Condition Nos. 3.3.4 and 3.3.5.

- The initial compliance demonstration was conducted on October 14, 2013. Therefore, the facility already met the requirements specified in 40 CFR 63.6612(a), 63.6630(a), (c), (e), 63.6645(h), and Item 14 of Table 5.

- For the NSCR system, the facility must follow the annual compliance demonstration requirements specified in 40 CFR 63.6640 (a) and (c) and Item 15.a.i. of Table 6 to 40 CFR 63 Subpart ZZZZ and use the equations in 40 CFR 63.6620(e). These are included in Condition 5.2.9 of the permit.

- Per 40 CFR 63.6640 (a) and Item 15.a.ii. of Table 6 to 40 CFR 63 Subpart ZZZZ, the facility must maintain the temperature at the catalyst inlet of the NSCR system between 750 degrees Fahrenheit (°F) and 1250°F. This is included in Condition 3.3.6 of the permit.

  In order to demonstrate compliance, both Item 14.a.ii. of Table 5 and Item 15.a.ii. of Table 6 require that the facility to install a continuous parameter monitoring system (CPMS) to continuously monitor the catalyst inlet temperature. This is included in Condition 5.2.3a. The alternative option in Item 14.a.ii. of Table 5 and Item 15.a.ii. of Table 6 is included in Condition 5.2.3b.

- The facility must operate the CPMS in Condition 5.2.3a. in accordance with the site-specific monitoring plan specified in 40 CFR 63.6625(b). 40 CFR 63.6625(b) and 63.6635 include the data recording requirements. These are included in Condition 5.2.6 of the Title V permit.

- In order to minimize emissions during periods of startup, 40 CFR 63.6625(h) requires that the facility minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. This is included in Condition 5.2.7.

- 40 CFR 63.6640(b) requires that the facility conduct a compliance demonstration within 90 days after the catalyst in the NSCR system is replaced. Per 40 CFR 63.6645(h), the facility must submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii) for C002 within 60 days following the completion of the performance test. These are included in Conditions 5.2.10 and 5.2.11.

40 CFR 63.6640(b) also requires that the facility report deviations according to the requirements specified in 40 CFR 63.6650. This is included in Condition 6.1.7c.iii.

- The deviation reporting requirements of 40 CFR 63.6640(e) are included in Condition 6.1.7.c.iv.

- The notification requirements specified in 40 CFR 63.6645(a) are either already met or not applicable. They are not included in the Title V permit.

- 40 CFR 63.6650(a) states that the facility must submit each applicable report in Table 7 to Subpart ZZZZ. Item 3 of Table 7 requires that the facility submit the results of the annual compliance demonstration for C002, if conducted during the reporting period, within the semiannual reports. The semiannual reports must also meet the requirements of 40 CFR 63.6650(b)(1) through (4). Condition 6.2.3 includes the above reporting requirements and the reporting requirements for the information specified in 40 CFR 63.6650(c).

- 40 CFR 63.6650(e) requires that the facility, for each deviation from an emission or operating limitation occurring for a stationary RICE where the facility uses a continuous monitoring system (CMS) to comply with the emission and operating limitations in 40 CFR 63 Subpart ZZZZ, include information in 40 CFR 63.6650(c)(1) through (4) and (e)(1) through (12). The facility uses CPMS to monitor the catalyst inlet temperature of the NSCR system. Therefore, Condition 6.2.4 includes the above requirements.

- 40 CFR 63.6655(a) states that the facility must keep the records described in Paragraphs (a)(1) through (5). Such records must include a copy of all of the above notifications and reports, records of the occurrence and duration of each malfunction of operation and action(s) taken during these periods, and so on. 40 CFR 63.6655(b) requires that the facility keep the records described in Paragraphs (b)(1) through (3) for each CPMS. 40 CFR 63.6655(d) requires that the facility keep the records required in Table 6 to Subpart ZZZZ to show continuous compliance with each applicable emission or operating limitation. Item 15.a. of Table 6 requires records that demonstrate continuous compliance with the requirements specified in Conditions 3.3.5, 3.3.6, 5.2.3a. and b., and 5.2.6. These are included in Condition 6.2.5.

- 40 CFR 63.6655(a) requires that the facility keep the records required by Conditions 5.2.3a. and b., 5.2.6, 5.2.8, 5.2.9, 5.2.10, 6.1.7c.iii. and iv., 6.2.3, 6.2.4, and 6.2.5 readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. This is included in Condition 6.2.6.

Georgia State Rules

The Compressor Turbines (Equipment ID Nos. C001 and C003) and the Compressor Engine (Equipment ID No. C002) are subject to the visible emission limit (40 percent opacity) specified in Georgia Air Quality Control Rule 391-3-1-.02(2)(b) "Visible Emissions." Since these engines and turbines fire exclusively on natural gas, it is very unlikely that the opacity limit will be exceeded. Compliance with this Georgia Rule (b) opacity limit is therefore expected.

Georgia Air Quality Control Rule 391-3-1-.02(2)(g)2 prohibits firing any fuel that contains greater than 2.5% percent sulfur, by weight, for fuel burning sources having a heat input below 100 MM Btu/hr. Please note that Condition 3.2.2 requires that the facility burn only natural gas in C001 through C003. Since natural gas contains a minimal amount of sulfur, the GA Rule (g) fuel sulfur content limits are considered to be subsumed by more stringent limits in Condition 3.2.2, and compliance is expected.

C. Permit Conditions

Condition 3.2.1 subjects C003 to the 40 CFR 60 Subpart GG NOx and permit fee reduction limits.

Condition 3.2.2 specifies the fuel type for the Compressor Turbines (ID No. C001 and C003) and the compression engine (ID No. C002). This subsumes the GA Rule (g) fuel sulfur content limit.

Condition 3.3.1 subjects No. 2 Compressor Turbine (Emission Unit ID No. C003) to 40 CFR 60 Subpart A and Subpart GG.

Condition 3.3.2 specifies the sulfur content by weight for any fuel fired in No. 2 Compressor Turbine (Emission Unit ID No. C003).

Condition 3.3.3 subjects the Waukesha Compressor Engine (Emission Unit ID No. C002) to 40 CFR 63 Subpart A and Subpart ZZZZ.

Conditions 3.3.4 and 5.2.7 include the requirements specified in 40 CFR 63.6605(a), (b), and 63.6625(h) for Waukesha Compressor Engine (Emission Unit ID No. C002).

Condition 3.3.5 requires that the facility operate the NSCR system at all times when Waukesha Compressor Engine (Emission Unit ID No. C002) is in operation. It also includes the three emission limitations included in Item 12 of Table 2d and Item 15.a.ii. of Table 6 to 40 CFR 63 Subpart ZZZZ.

Condition 3.3.6 requires that the facility maintain the catalyst inlet temperature of the NSCR system between 750ºF and 1250ºF.

Condition 3.4.1 includes the GA Rule (b) visible emission standard for Emission Unit ID Nos. C001 through C003.

Condition 3.4.2 includes the GA Rule (g) sulfur limit for any fuel fired in Emission Unit ID Nos. C001 and C002.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

The facility was issued a Minor Source Operating Permit No. 4922-095-0085-S-04-0 on September 8, 2015. A CO and NOx performance test was conducted on August 31, 2016 to verify the after-control emission rates provided by the manufacturer prior to NSCR installation were achieved. Throughout testing, the facility was unable to consistently maintain the after-control NOx emission rate of 1 gram per horsepower-hour (g/hp-hr).

Therefore, as a result of the performance testing, the facility no longer qualified as a synthetic minor due to potential emissions of NOx exceeding the applicable major source threshold of 100 tpy. As required by Condition 6.3 of the old air permit, the facility submitted the previous Title V application TV-43236 within 60 days of the emission test date. Because the facility was unable to consistently maintain the after-control NOx emission rate of 1 gram per horsepower-hour (g/hp-hr), this application used the original NOx manufacturer-provided emission rate of 8.5 g/hp-hr to calculate the potential emissions for Compressor Engine C002.

The RICE MACT requires initial and annual compliance demonstrations for the engine at Albany Compressor Station. The initial compliance demonstration consists of three 15-minute test runs and the annual compliance demonstrations consist of one 15-minute test run. The facility completed the initial demonstration on January 19, 2011. The Permittee may demonstrate compliance with any of the three emission limitations (CO reduction, CO concentration, or THC reduction).

In the event of replacing the gas generator assembly and/or combustion can on No. 2 Compressor Turbine (ID No. C003), Condition 4.2.1 contains the performance testing requirements for demonstrating compliance with the 40 CFR 60 Subpart GG NOx emission standard.

Condition 4.2.2 requires the subsequent annual demonstrations for 63 CFR Subpart ZZZZ.

Conditions 4.2.3 and 4.2.4 contain specific procedures for reducing the data from the compliance demonstrations.

Condition 4.2.5 contains requirements to determine the engine load during the compliance demonstrations per the RICE MACT.

Condition 4.2.6 contains the steps to be taken, per the RICE MACT, if an annual compliance demonstration falls outside the required emission limitations.

Condition 4.2.7 requires another compliance demonstration if the catalyst in the NSCR system is replaced per the RICE MACT.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Condition 5.2.1 requires the Permittee to install, calibrate, maintain, and operate monitoring devices to measure (a) the quantity of natural gas in cubic feet burned in the turbine, and (b) the combustor outlet temperature. This condition is necessary to satisfy a monitoring requirement of the Part 70 rule and 40 CFR 60 Subpart GG NOx emission standard.

Condition 5.2.2 specifies how to demonstrate that the fuel sulfur content is less than 0.8 percent by weight to satisfy the fuel sulfur content standard in 40 CFR 60.333(b).

Conditions 5.2.3a. and b. require that the facility monitor the catalyst inlet temperature of the NSCR system or install equipment to immediately shut down C002 if the catalyst inlet temperature exceeds 1250°F.

The RICE MACT requires that the engine at the Albany Compressor Station continuously measure the temperature at the inlet to the NSCR. The temperature data is recorded, and the data is reduced to 4-hour rolling averages. Alternatively, equipment can be installed to immediately shut down the engine if the temperature at the inlet to the NSCR exceeds 1250 °F. These requirements are contained in Conditions 5.2.3 through 5.2.5.

The RICE MACT requires a site-specific monitoring plan for the NSCR system inlet temperature monitoring device. Requirements for this monitoring plan are contained in Condition 5.2.6.

Condition 5.2.7 contains the RICE MACT requirement that the time for startup be minimized and startup is limited to 30 minutes.

Condition 5.2.8 includes the monitoring requirements specified in 40 CFR 63.6635.

Condition 5.2.9 includes the annual compliance demonstration requirements specified in 40 CFR 63.6640(a), (c), and Item 15.a.i. of Table 6 to 40 CFR 63 Subpart ZZZZ.

In the event of changing the catalyst of the NSCR system, Condition 5.2.10 includes the initial compliance demonstration and notification requirements specified in 40 CFR 63.6640(b) and 63.6645(h).

Condition 5.2.11 discusses the requirement to submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii) for the Waukesha Compressor Engine (Emission Unit ID No. C002).

C. Compliance Assurance Monitoring (CAM)

Not Applicable.

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

Pursuant to 40 CFR 60.331(t)(2), Condition 6.1.7a.i defines as an excess emission any analysis of natural gas combusted in Turbine C003 that indicates a sulfur content greater than 0.8 percent by weight.

Condition 6.1.7c.i defines as an excursion any one-hour combustor outlet temperature for Turbine C003 that exceeds the test average temperature, which is 1070 °F until the performance test is conducted, by more than 50 °F.

Condition 6.1.7c.ii defines as an excursion, any four-hour period during which average temperature at the inlet to the nonselective catalytic reduction system (ID No. NSCR), as determined in accordance with Conditions 5.2.8b and 5.2.10, is less than 750 °F or greater than 1250 °F.

Condition 6.1.7c.iii defines as an excursion any instance that the Permittee does not meet the requirements specified in Condition 3.3.5.

Condition 6.1.7c.iv defines as an excursion, any instance that the Permittee does not meet the requirements in Table 8 that apply to Compressor Engine No. 2 (ID No. C002) are not met.

B. Specific Record Keeping and Reporting Requirements

Condition 6.2.1 requires that the facility notify the Division within 15 days of completing installation of a new or re-built gas generator assembly or combustion can on No. 2 Compressor Turbine (Equipment Unit ID No. C003.)

Condition 6.2.2 requires the facility to record each month and maintain records of the amount of natural gas combusted in No. 2 Compressor Turbine (Equipment Unit ID No. C003.)

Condition 6.2.3 includes the reporting requirements specified in 40 CFR 63.6650(a), (b)(1) through (4), (c), and Item 3 of Table 7 to 40 CFR 63 Subpart ZZZZ.

Condition 6.2.4 includes the deviation reporting requirements specified in 40 CFR 63.6650(e).

Condition 6.2.5 includes the record keeping requirements specified in 40 CFR 63.6655(a), (b), and (d).

Condition 6.2.6 includes the record keeping requirements specified in 40 CFR 63.6660(c).

VII. Specific Requirements

A. Operational Flexibility

Not applicable.

B. Alternative Requirements

Not applicable.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

Not applicable.

E. Short-Term Activities

Not applicable.

F. Compliance Schedule/Progress Reports

Not applicable.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Stratospheric Ozone Protection Requirements

Not applicable.

J. Pollution Prevention

Not applicable.

K. Specific Conditions

Not applicable.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//