

**STATEMENT OF BASIS
GULFSTREAM NATURAL GAS SYSTEM, LLC
COMPRESSOR STATION 100/410
CODEN, MOBILE COUNTY, ALABAMA
FACILITY/PERMIT NO. 503-0046**

This proposed renewal to the Title V Major Source Operating Permit (MSOP) 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.

Gulfstream Natural Gas System, LLC's (Gulfstream) Compressor Station 100/410 was originally constructed/began operations in 2002. The initial MSOP was issued on March 26, 2004, and this is the fourth renewal of the MSOP. The current MSOP was issued on June 16, 2020, became effective on July 7, 2020, underwent a significant modification on April 24, 2024, and is scheduled to expire on July 6, 2025. Per ADEM Admin Code r. 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. Based on this rule, the application for renewal was due to the Department no later than January 6, 2025, but no earlier than January 6, 2024. The initial application for this renewal was received December 20, 2024, and deemed complete on December 20, 2024.

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

There are no current or ongoing enforcement actions against Gulfstream 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 AL0000000109700046).

Facility Operations

Gulfstream operates Compressor Station 100/410 for the transmission of pipeline natural gas (SIC 4922) located in Coden, Mobile County. Natural gas enters the facility and compressors boost the pressure of the gas for transmission in the pipeline downstream of the facility. The gas compressors are driven by stationary natural gas-fired turbines. All yard piping, including the pigging and filtering equipment, and most of the other equipment in natural gas service (e.g. compressors, engine fuel gas systems, and gas meters) must be depressurized (blown down) during maintenance. Most venting activities are intermittent and only performed during scheduled maintenance activities and upset/emergency situations. Significant sources of air pollutants at this facility include:

Emission Unit Nos. 001 - 003: Three (3) 37,896 hp Rolls Royce Coberra 6562 DLE Natural Gas-fired Combustion Turbines [Combustion Turbine Nos. 1-3 (CT-1, CT-2, and CT-3)]

Emission Unit No. 004: One (1) 17,250 hp Solar Mars 100-15000S Natural Gas-fired Combustion Turbine Equipped with Dry Low NO_x Combustor [Combustion Turbine No. 4 (CT-4)]

Emission Unit Nos. 005 - 006: Two (2) 4,259 hp Caterpillar G3616, 4-Stroke, Lean-Burn (4SLB), Natural Gas-fired Emergency Reciprocating Engines [Emergency Generator Engine Nos. 1 and 2 (EMRG-1 and EMRG-2)]

Emission Unit No. 007: One (1) 17,030 hp Solar Mars 100-16000S Natural Gas-fired Combustion Turbine Equipped with Dry Low NO_x Combustor [Combustion Turbine No. 5 (CT-5)]

Insignificant emission sources at this facility include natural gas starters, storage tanks for used oil and condensate liquids, pipeline blowdowns, degreasers, and pigging activities.

Proposed Changes

The current MSOP underwent a significant modification on April 24, 2024, in order to incorporate the requirements of Air Permit No. X005 as Emission Unit No. 007 for the addition of a 17,030 hp Solar Mars 100-16000S natural gas-fired combustion turbine equipped with dry low NO_x combustion (CT-5).

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	Amendments/ Modifications	PSD SERs Exceeded (Y/N)
AP ¹ X001 – X003-CT-1, CT-2, CT-3 - (new)	PSD ² BACT ³ limits for NO _x , CO, VOC, & PM ₁₀ & PSD BACT cumulative operating hours emission limits established	June 29, 2001	--	--	--	Y
AP X001 – X003-CT-1, CT-2, CT-3 – re-issued	re-issued to establish a lower minimum load operating limit – no change to current PSD BACT emission limits established in original permitting	October 9, 2003	--	--	--	N
Initial Title V MSOP	--	March 26, 2004	March 26, 2004	March 25, 2009	--	--
AP X004 – CT-4 – (new)	NO _x SMS ⁴ emission limit established	January 12, 2007	--	--	--	N
1 st Title V MSOP Renewal	--	March 23, 2009	March 25, 2009	March 25, 2014	--	--
2 nd Title V MSOP Renewal	--	July 7, 2015	July 7, 2015	July 6, 2020	--	--
AP X005 – CT-5 – (new)	NO _x SMS emission limit established	May 28, 2020	--	--	--	N
3 rd Title V MSOP Renewal	--	June 16, 2020	July 7, 2020	July 6, 2025	Significant Modification - April 24, 2024 - Incorporate AP X005	--

¹AP = Air Permit

²PSD = Prevention of Significant Deterioration

³BACT = Best Available Control Technology

⁴SMS = PSD Synthetic Minor Source

Plant-Wide Potential to Emit (PTE)

Pollutant	PTE (TPY)
PM/PM ₁₀ /PM _{2.5}	33.62
NO _x	638.32
CO	356.05
SO ₂	17.16
VOC	259.66
Total HAP	6.77
CO _{2e}	622,677.00

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 tons per year (TPY) major source threshold. It is a minor 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. 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. This facility is considered a major source under PSD regulations because the facility-wide potential emissions of NO_x, CO, and VOC each exceed 250 TPY. On June 29, 2001, Gulfstream underwent PSD for the installation of CT-1, CT-2, and CT-3, for NO_x, CO, VOC, and PM₁₀. The Best Available Control Technology (BACT) implemented was emissions limits and an hourly operational limit. Each turbine is subject to emissions limits for NO_x (42.0 lb/hr or 30 ppmvd at 15% O₂), CO (20.5 lb/hr or 30 ppmvd at 15% O₂), VOC (18.14 lb/hr or 7.0 ppmvw at 15% O₂), and PM₁₀ (3.0 lb/hr and 7.5 lb/MMscf) and there is a combined operational limit of 20,000 hours during any consecutive 12-month period. CT-4 is subject to a synthetic minor source emission limit for NO_x (8.49 lb/hr) which was established to avoid exceeding the PSD significant emission rate (SER) for NO_x. CT-5 is subject to a synthetic minor source emission limit for NO_x (7.78 lb/hr or 15 ppmvd at 15% O₂) which was established to avoid exceeding the PSD SER for NO_x.

When EMRG-1 and EMRG-2 were initially placed into service they did not undergo a PSD review. However, in a letter dated June 29, 2001, EPA expressed their concerns regarding the size of these engines and the fact that they were not addressed in the PSD review along with the CT-1 through CT-3 turbines. EPA requested the Department permit the engines and place hourly limits on these engines because of their size and the expected level of operation. The facility elected to limit the emissions from both units by restricting each unit's hours of operation to 500 hours during any consecutive 12-month period to comply with EPA's request. The hourly operation limits were not included in the initial Title V MSOP because the sources were originally considered insignificant activities. The engines and applicable hourly operating limits were included in the renewal permit issued July 7, 2015.

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)]

CT-1, CT-2, and CT-3 each have a heat input at peak load greater than 10 MMBtu/hr and were each manufactured in 2001, after the October 3, 1977, applicability date of Subpart GG; therefore, they are each subject to this Subpart. In accordance with 40 CFR §60.332(a)(2) and 40 CFR §60.333(a) and (b), each unit is subject to applicable NO_x and SO₂ emission limits under this Subpart; however, each of these turbines is also subject to PSD/BACT limits for NO_x, which are more stringent than the applicable Subpart GG limits defined in 40 CFR §60.332(a)(2). Therefore, compliance with the NO_x emission limit of this Subpart is met by demonstrating compliance with the applicable PSD/BACT NO_x emission limit. In accordance with 40 CFR §60.333(a) and (b), CT-1, CT-2, and CT-3 are each subject to an SO₂ emission limit of 150 ppmvd at 15% O₂, or as an alternative, no fuel shall be burned that contains total sulfur in excess of 0.8% by weight (8,000 ppmw).

Initial performance testing required by 40 CFR §60.335 for each turbine demonstrated that each unit complies with the applicable NO_x standard. Gulfstream certifies the fuel burned in each unit meets the definition of natural gas by maintaining a current tariff sheet specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less as allowed by 40 CFR §60.334(h)(3)(i) to demonstrate compliance with the applicable SO₂ standard.

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)]

CT-4 and CT-5 each have a heat input at peak load greater than 10 MMBtu/hr and were manufactured in 2007 and 2021, respectively, after the February 18, 2005, applicability date for this standard; therefore, they are each subject to this Subpart. They are each classified as a new turbine firing natural gas with a heat input at peak load greater than 50 MMBtu/hr and less than or equal to 850 MMBtu/hr.

Emission Limitations

Subpart KKKK regulates emissions of NO_x and SO₂. In accordance with 40 CFR §60.4320(a) and Table 1 to Subpart KKKK, each turbine is subject to a NO_x emission limit of 25 ppmvd at 15% O₂ or 150 ng/J of useful output (1.2 lb/MWh). Gulfstream has elected to comply with the NO_x emission limit of 25 ppmvd at 15% O₂. In accordance with 40 CFR §60.4330(a), Gulfstream is subject to an SO₂ emission limit in which the turbine may not burn any fuel which contains total potential SO₂ emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input, or discharge into the atmosphere any gases which contain SO₂ in excess of 0.90 lb/MWh (110 ng/J) gross output. Gulfstream has elected to comply with the SO₂ emission limit in which the turbine may not burn any fuel which contains total potential SO₂ emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. According to the manufacturer's guaranteed emission rate, the turbine has the potential to emit NO_x at 15 ppmvd at 15% O₂. CT-5 is subject to an emission limit of 15 ppmvd at 15% O₂ and 7.78 lb/hr for NO_x that was established in order to remain below the PSD SER level for NO_x. As a result, when demonstrating compliance with each PSD SMS emission limitation for NO_x, Gulfstream will satisfy the compliance requirements with each Subpart KKKK requirement. Gulfstream complies with the SO₂ emission standard by burning fuel with a total sulfur content less than 1.0 gr/scf (0.003 lb SO₂/MMBtu).

Compliance Requirements

Gulfstream demonstrates compliance with the NO_x emission limit through performance testing (see *Testing Requirements* section below). 40 CFR §60.4365(a) exempts Gulfstream from monitoring the total sulfur content of fuel by demonstrating that the fuel does not exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. The required demonstration is made by maintaining fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for the natural gas is 20 grains of sulfur or less per 100 standard cubic feet.

Testing Requirements

40 CFR §60.4400 requires an initial performance test within 60 days of achieving the maximum production rate, but not later than 180 days after initial startup as required by 40 CFR §60.8(a). In accordance with 40 CFR §60.4415(a), subsequent NO_x performance tests are required on an annual basis with no more than 14 calendar months following the previous performance test. 40 CFR §60.4340(a) states that if NO_x emission results from the performance test are less than or equal to 75% of the NO_x emission limit, the frequency of subsequent performance tests may be reduced to once every two years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75% of the NO_x emission limit, then annual performance testing must resume. Performance testing for each turbine demonstrated that they can comply with the applicable NO_x standard.

Notification, Reports, and Records

40 CFR §60.8(d) requires Gulfstream to notify the Air Division at least 30 days prior to conducting any performance test. 40 CFR §60.4375(b) requires Gulfstream to submit a written test report within 60 days of completing the performance test.

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 CT-1 through CT-4 commenced construction prior to the August 23, 2011, applicability date of this regulation, and the compressor associated with CT-5 commenced construction on June 22, 2020, after the September 18, 2015, applicability date of this regulation; therefore, this facility is 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)]

The compressors associated with CT-1 through CT-4 commenced construction prior to the September 18, 2015, applicability date of this regulation; therefore they are not subject to this Subpart. The compressor associated with CT-5 commenced construction after the September 18, 2015, applicability date of this regulation; therefore, CT-5 is subject to this Subpart. According to 40 CFR §§60.5365a(d)(1) and (j), the turbine is subject to the pneumatic controller and fugitive equipment components requirements of this Subpart. The turbine is not subject to the requirements for a centrifugal compressor affected facility because it is equipped with dry gas seals rather than wet gas seals. 40 CFR §60.5370a states Gulfstream must be in compliance with the standards of

this Subpart upon startup of the turbine and must, at all times, maintain and operate the affected facility in a manner consistent with good air pollution control practices for minimizing emissions.

Gulfstream must comply with the VOC standards that apply to pneumatic controller affected facilities in 40 CFR §§60.5390a(c)(1) and (2). Gulfstream complies with this standard by using pneumatic supply gas controllers with a bleed rate less than or equal to 6 standard cubic feet per hour. According to 40 CFR §60.5390a(d), initial compliance with this standard must be demonstrated by the requirements of 40 CFR §60.5410a(d)(3), which states that the controller manufacturer's design specifications must indicate the controller emits less than or equal to 6 cubic feet of gas per hour. 40 CFR §60.5410a(d)(4) states each new pneumatic controller affected facility must be tagged according to the requirements of 40 CFR §§60.5390a(b)(2) or (c)(2). 40 CFR §60.5410a(d)(5) states Gulfstream must submit an annual report for the affected controller facilities according to the requirements of 40 CFR §§60.5420a(b)(1) and (5). 40 CFR §60.5410a(d)(6) states records must be maintained as specified in 40 CFR §60.5420a(c)(4) for each pneumatic controller affected facility.

Initial and continuous compliance with the fugitive equipment components requirements are outlined in 40 CFR §60.5410a(j) and 40 CFR §60.5415a(h), respectively. Gulfstream must develop a fugitive emissions monitoring plan as required in 40 CFR §§60.5397a(b)(c), and (d), conduct an initial monitoring survey as required in 40 CFR §60.5397a(f)(2) and periodic monitoring surveys as required in 40 CFR §60.5397a(g), maintain records as specified in 40 CFR §60.5420a(c)(15), must repair each identified source of fugitive emissions for each affected facility as required in 40 CFR §60.5397a(h), and must submit an annual report for each collection of fugitive emissions components as required in 40 CFR §§60.5420a(b)(1) and (7).

In accordance with 40 CFR §60.5410a(j)(5), the initial annual report is due no later than 90 days after the end of the initial compliance period as required in 40 CFR §60.5420a(b). This date is established by the initial startup date and upon issuance of Temporary Authorization to Operate (TAO). Gulfstream was issued TAO for CT-5 on June 22, 2022, with an initial startup date of July 15, 2022. Therefore, the initial annual report was due no later than October 15, 2023. This report was received on October 12, 2023. Subsequent annual reports are due no later than the same date each year as the initial annual report. Gulfstream may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (8) of 40 CFR §60.5420a(b), except as provided in paragraph (b)(13) of this section. Gulfstream must submit all reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's CDX system (<https://cdx.epa.gov/>). Annual reports may coincide with Title V reports as long as all the required elements of the annual report are included.

Records required by this Subpart are outlined in 40 CFR §§60.5420a(c)(4) and (15). Records must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by this Subpart that are submitted electronically via the EPA's CDX system may be maintained in electronic format.

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)

The compressors associated with all units at this facility were installed prior to the December 6, 2022, applicability date of this regulation; 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 of HAP emissions; therefore, none of the combustion turbines at the facility are affected sources under this Subpart.

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)]

The stationary reciprocating internal combustion engines (RICE) at the facility are affected sources under this Subpart. EMRG-1 and EMRG-2 are each classified as existing 4SLB SI emergency RICE located at an area source of HAP. In accordance with 40 CFR §63.6595(a)(1), Gulfstream is required to meet the requirements of this Subpart and Subpart A for each of these RICE.

Compliance Requirements

These engines are being operated as emergency units; therefore, in accordance with 40 CFR §63.6640(f), to retain the emergency classification, each engine must 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)

According to 40 CFR §63.6603, any existing stationary RICE located at an area source of HAP emissions must comply with applicable emission limitations and other requirements in Table 2d of Subpart ZZZZ.

According to Table 2d, Item 5, existing emergency SI RICE are subject to the following work practice requirements:

- Change oil and filter every 500 hours of operation or within one year plus 30 days of previous change, whichever comes first; or participate in the oil analysis program as allowed by 40 CFR §63.6625(j);
- Inspect spark plugs every 1,000 hours of operation or within one year plus 30 days of previous inspection, whichever comes first, and replace as necessary; and
- Inspect all hoses and belts every 500 hours of operation or within one year plus 30 days of previous inspection, whichever comes first, and replace as necessary.

40 CFR §63.6625(e)(3) and Table 6, Item 9, requires each unit be operated and maintained according to the manufacturer's emission related operation and maintenance instructions or develop and follow a 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 if one is not already installed.

Testing Requirements

According to Tables 4 and 5 of the Subpart, no initial or subsequent performance testing is required for these emergency engines.

Notification, Reports, and Records

According to 40 CFR §63.6655(e)(2), Gulfstream must keep records of the maintenance conducted on each existing emergency stationary RICE in order to demonstrate the engines are operated and maintained according to their own maintenance plan. 40 CFR §63.6655(f)(2), requires Gulfstream to keep records of the hours of operation of each engine that is recorded through the non-resettable hour meter. Gulfstream must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

Mandatory Greenhouse Gas Reporting

40 CFR Part 98, Subpart A General Provision

This facility is subject to a listed source category (Petroleum and Natural Gas Systems in Subpart W) as defined in 40 CFR §98.2(a)(2) and Table A-4, and is subject to this rule 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 CO₂e or more per year from all stationary fuel combustion sources combined. Gulfstream must calculate greenhouse gas quantities annually according to the methodologies described in 40 CFR §98.2(c). In accordance with 40 CFR §98.3(g), Gulfstream would be required to maintain records of actual CO₂, CH₄, and N₂O emissions to determine the actual CO₂e 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(b). In accordance with 40 CFR §98.5, the annual report must be submitted electronically via EPA's Central Data Exchange in accordance with the requirements of 40 CFR §98.4. 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 engines and turbines 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 engines and turbines 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 are 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 engines and turbines are fuel combustion sources, they are not subject to 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 this facility considered one of the process industries, general or specific.

Emission Testing and Periodic Monitoring

Gulfstream is required to certify on a semiannual basis that only natural gas was burned in all units 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 monitor compliance with the applicable PSD/BACT NO_x, CO, and VOC emission limits for CT-1, CT-2, and CT-3, emissions testing is required twice per calendar year at a frequency of once per semiannual period (January 1st - June 30th and July 1st - December 31st) during which a unit operates for the purposes of production (i.e. the compression/transmission of natural gas), with a minimum of three (3) calendar months elapsing between tests, conducted in accordance with an approved EPA Reference Method for each pollutant. If results from a performance test are less than or equal to the emission limit, then the frequency of subsequent performance tests may be reduced from a semiannual to annual basis. If the results of any subsequent performance test exceed the emission limit, then semiannual performance testing must resume until the unit shows compliance for two consecutive testing events demonstrating emissions are less than or equal to the emission limit, at which time annual testing may resume. After the first emissions test conducted following the issuance of this renewal permit, no periodic monitoring testing will be required if a unit does not operate for production purposes for more than 480 hours during the semiannual testing period or 960 hours during the annual testing period, whichever applies. This testing exception was requested by Gulfstream during the initial Title V permit issuance process and was agreed upon by the Air Division. Gulfstream is not required to test for the applicable PSD/BACT PM₁₀ emission limit. The combustion of pipeline quality natural gas is viewed as being representative of BACT for PM₁₀. The Department’s observation, based on years of evidence, is that natural gas-fired combustion units should not have any opacity during normal operation. Therefore, the Department’s consistent determination is that additional monitoring for opacity and subsequently PM₁₀ emissions is not necessary on units such as these natural gas-fired combustion turbines. It should also be noted that the Federal rule applicable to these units (40 CFR Part 60, Subpart GG) neither addresses or anticipates visible emissions sufficient to require monitoring.

To monitor compliance with the applicable PSD synthetic minor source NO_x emission limits for CT-4 and CT-5, emission testing is required twice per calendar year at a frequency of once per semiannual period (January 1st - June 30th and July 1st - December 31st) during which a unit operates for the purposes of production (i.e. the compression/transmission of natural gas), with a minimum of three (3) calendar months elapsing between tests. The first emissions test conducted following the issuance of this permit shall be conducted using an approved US EPA Reference Method. If

results from the performance test are less than or equal to 75% of the emission limit, then the frequency of subsequent performance tests may be reduced from a semiannual to an annual basis. If the results of any subsequent performance test exceed 75% of the emission limit, then semiannual performance testing must resume until the unit shows compliance for two consecutive testing events demonstrating emissions are less than or equal to 75% of the emission limit, at which time annual testing may resume. To monitor compliance with the applicable Subpart KKKK NO_x emission limits for CT-4 and CT-5, Gulfstream is also required to perform subsequent emission testing once per calendar year during which a unit operates for the purposes of production (i.e. the compression/transmission of natural gas). Periodic monitoring may be conducted concurrently with the annual or biennial EPA Reference Method test that is required by 40 CFR Part 60, Subpart KKKK. No periodic monitoring is required if the unit does not operate for production purposes during the annual testing period.

To determine compliance with the SO₂ standard in 40 CFR Part 60, Subpart GG, for CT-1, CT-2, and CT-3, and the SO₂ standard in 40 CFR Part 60, Subpart KKKK, for CT-4 and CT-5, Gulfstream must continue to demonstrate the fuel meets the definition of natural gas in 40 CFR §60.331(u) and 40 CFR §60.4365(a), respectively, per Gulfstream's Federal Energy Regulatory Commission (FERC) Natural Gas Tariff.

Recordkeeping and Reporting

In addition to the recordkeeping and reporting required to comply with 40 CFR Part 63, Subpart ZZZZ for EMRG-1 and EMRG-2, as part of the Semiannual Monitoring Report, Gulfstream 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). Gulfstream is also required to include a statement addressing whether a unit operated for production purposes during the respective reporting period. Gulfstream is required to maintain monthly records of the operating hours, fuel gas consumption, fuel heat input, and emissions to comply with the PSD/BACT limits for CT-1, CT-2, and CT-3. Gulfstream 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. Gulfstream is required to maintain the most current fuel tariff sheet on-site in a form suitable for inspection as a method for monitoring compliance with 40 CFR §60.4330(a) of Subpart KKKK for CT-4 and CT-5. 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 5 years from the date of generation of each record and be readily available for inspection upon request. Gulfstream must retain records of the most recent 2 years on site. Records of the remaining 3 years may be retained off site.

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.

The combustion turbines (CT-1 through CT-5) are subject to emission limits or standards; however, they are not equipped with a control device to meet the limits or standards. The turbines are equipped with low NO_x burners; however, low NO_x burner technology is not included in the definition of a “control device” under 40 CFR §64.1. Therefore, the turbines would not be subject to CAM. The emergency engines (EMRG-1 and EMRG-2) have pre-controlled emissions that are greater than or equal to 100 tons per year for criteria pollutants and they are subject to an emission limit or standard; however, they are not equipped with a control device. Therefore, the emergency engines would not be subject to CAM. As such, the facility is not required to submit a CAM plan for this renewal.

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 Gulfstream Natural Gas System, LLC’s Title V MSOP (503-0046) be renewed with the requirements noted above, pending the resolution of any comments received during the 30-day public comment period and the EPA 45-day review.

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Date

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