STATEMENT OF BASIS
BAY GAS STORAGE COMPANY, LLC
MCINTOSH, WASHINGTON COUNTY, ALABAMA
FACILITY/PERMIT NO. 108-0017

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.

Bay Gas Storage Company, LLC (Bay Gas) originally constructed/began operations in 1993. The current MSOP was issued on March 30, 2020, became effective on April 14, 2020, and is scheduled to expire on March 13, 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 October 13, 2024, but no earlier than October 13, 2023. The initial application for this permit renewal was submitted October 10, 2024, and received October 13, 2024. Updated applications were submitted to the Department on December 3, 2024, received on December 9, 2024, and submitted and received via email on January 23, 2025. An addendum was submitted via email on March 12, 2025. The application was deemed complete on March 12, 2025. The initial MSOP was issued on April 13, 2015, and this is the second renewal of the MSOP.

The facility is located in Washington 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 Bay Gas 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 AL0000000112900017).

Facility Operations

Bay Gas operates a natural gas storage terminal designed for injection, storage, and withdrawal of natural gas in underground salt dome caverns (SIC 4922) located in McIntosh (Washington County). The facility stores natural gas in five (5) underground salt dome caverns for customers that operate pipeline facilities.

The following are the significant sources of air pollutants at this facility:

Emission Unit Nos. 001 and 002: Two (2) 2,000 hp Natural Gas-fired 4-Stroke Lean-Burn (4SLB) Reciprocating Internal Combustion Engines (RICE) [Compressor Engine (CE) Nos. 1 and 2]

Emission Unit Nos. 003 and 004: Two (2) 4,735 hp Natural Gas-fired 4SLB RICE [CE Nos. 4 and 5]

Emission Unit Nos. 005 and 006: Two (2) 4,735 hp Natural Gas-fired 4SLB RICE with Catalytic Converter [CE Nos. 3 and 12]

Emission Unit Nos. 007 and 008: Two (2) 10.06 MMBtu/hr Withdrawal Gas Heaters [Heater Nos. 1 and 2]

Emission Unit Nos. 009, 010, and 011: Three (3) 18.12 MMBtu/hr Withdrawal Gas Heaters [Heater Nos. 3, 4, and 5]

Emission Unit No. 012: One (1) 1.7 MMBtu/hr Triethylene Glycol (TEG) Reboiler [Reboiler No. 1] with a 610 MMSCFD TEG Dehydration Unit (Skid No. 1)

Emission Unit Nos. 013, 014, and 015: Three (3) 2.0 MMBtu/hr TEG Reboilers [Reboiler Nos. 2, 3, and 4] with Three 350 MMSCFD TEG Dehydration Units [Skid Nos. 2, 3, and 4]

Emission Unit No. 016: One (1) 449 hp Diesel-fired Emergency Generator RICE [Emergency Generator Engine No. 1]

Emission Unit No. 018: One (1) 755 hp Diesel-fired Emergency Generator RICE [Emergency Generator Engine No. 3]

Emission Unit No. 019: One (1) 0.5 MMBtu/hr Natural Gas-fired Fuel Gas Heater [Heater No. H-7860]

The following are the insignificant emission sources at this facility:

- One (1) 2,000 gallon Waste Water Storage Tank [Tank No. T112]
- One (1) 2,000 gallon New TEG Storage Tank [Tank No. T114]
- One (1) 4,000 gallon Methanol Storage Tank [Tank No. T118]
- One (1) 2,000 gallon Used TEG Storage Tank [Tank No. T119]
- One (1) 2,000 gallon Used Oil Tank [Tank No. T212]
- One (1) 4,000 gallon Ambitrol Storage Tank [Tank No. T213]
- One (1) 19,813 gallon Oily Water Storage Tank [Tank No. T801]
- One (1) 2,000 gallon Crankcase Oil Storage Tank [Tank No. TK720]
- One (1) 2,000 gallon Crankcase Oil Storage Tank [Tank No. V213]

The following are the trivial emission sources at this facility:

- One (1) 1,000 gallon Diesel Storage Tank [Tank No. T117]
- Two (2) 1,000 gallon Lube Oil Tanks [Tank Nos. T110 and TK710]
- One (1) 1,000 gallon Used Oil Storage Tank [Tank No. T111]
- One (1) 500 gallon Lube Oil Storage Tank [Tank No. V214]
- One (1) 1,000 gallon Lube Oil Storage Tank [Tank No. TK730]
- One (1) 500 gallon Gasoline Storage Tank [Tank No. T500]

Proposed Changes

There have been no modifications to or additions of significant emission sources at this facility since the issuance of the current MSOP.

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	PSD Exceeded (Y/N)
SMOP[1] X001 – (C-100) (new)	- NO_x, CO, and CH_2O SMS emission limits established - SMS Operational limits established	September 23, 2002	--	--	N
SMOP X002 – (C-101) (new)	- NO_x, CO, and CH_2O SMS emission limits established - SMS Operational limits established	September 23, 2002	--	--	N
SMOP X003 – (C-201) (new)	- NO_x, CO, and CH_2O SMS emission limits established - SMS Operational limits established	September 23, 2002	--	--	N
SMOP X004 – (C-202) (new)	- NO_x, CO, and CH_2O SMS emission limits established - SMS Operational limits established	September 23, 2002	--	--	N
SMOP X005 – (C-200) (new)	- NO_x, CO, and CH_2O SMS emission limits established - SMS Operational limits established	September 23, 2002	--	--	N
SMOP X006 – (C-100) (existing)	- SMS Operational limits increased - Combined SMS operational limits	January 8, 2004	--	--	N
SMOP X007 – (C-101) (existing)	- SMS Operational limits increased - Combined SMS operational limits	January 8, 2004	--	--	N
SMOP X008 – (C-201) (existing)	- SMS Operational limits increased - Combined SMS operational limits	January 8, 2004	--	--	N
SMOP X009 – (C-202) (existing)	- SMS Operational limits increased - Combined SMS operational limits	January 8, 2004	--	--	N
SMOP X010 – (C-200) (existing)	- SMS Operational limits increased - Combined SMS operational limits	January 8, 2004	--	--	N
SMOP X011 - (H1-P100 H1-P200) (new)	- SMS Operational limits established	April 9, 2007	--	--	N
SMOP X012 - (P2-H100 P2-H200) (new)	- SMS Operational limits established	April 9, 2007	--	--	N
AP[2] X013 - (C-100, C-101, C-201, C-202) (existing)	- PSD SMS Operational limits established, increased - EU Nos 001-004 combined into one permit	December 29, 2010 *Facility re-permitted	--	--	N
AP X014 – (C-200) (existing)	- PSD SMS Operational limits established, increased	December 29, 2010	--	--	N
AP X015 - (H1-P100 H1-P200) (existing)	- SMS Operational limits removed	December 29, 2010	--	--	N

AP X016 - (P2-H100 P2-H200) (existing)	- SMS Operational limits removed	December 29, 2010	--	--	N
AP X017 – (Heaters 5&6) (new)	--	December 29, 2010	--	--	N
AP X018 – (C-500, C-501, C-502) (new)	--	December 29, 2010	--	--	N
AP X019 – (Emer Generator Engine No. 1-2 (existing) No. 3 (new)	- Emergency Operational limits established	December 29, 2010	--	--	N
AP X020 – (C-100, C-101) (existing)	- PSD SMS Operational limits established, increased - AP X020-X023 combined one SMS operational limit	May 22, 2012	--	--	N
AP X021 – (C-201, C-202) (existing)	- PSD SMS Operational limits established, increased - AP X020-X023 combined one SMS operational limit	May 22, 2012	--	--	N
AP X022 – (C-200) (existing)	- PSD SMS Operational limits established, increased - AP X020-X023 combined one SMS operational limit	May 22, 2012	--	--	N
AP X023 – (C-7400) (new)	- SMS Operational limits established - AP X020-X023 combined one SMS operational limit	May 22, 2012	--	--	N
AP X024 – (H-7500) (new)	--	May 22, 2012	--	--	N
AP X025 – (Skid No.1 including Reboiler No.1) (existing)	- SMS Operational limits established	May 22, 2012	--	--	N
AP X026 – (Skid Nos. 2,3, and 4 and Reboiler Nos. 2,3, and 4) (existing)	- SMS Operational limits established - Combined one SMS operational limit	May 22, 2012	--	--	N
Initial Title V MSOP	--	April 13, 2015	April 13, 2015	April 13, 2020	--
1st Title V MSOP Renewal	--	March 30, 2020	April 14, 2020	April 13, 2025	--

1 – Synthetic Minor Operating Permit
2 – Air Permit

Facility-wide emission limits (NO_x, CO, and Formaldehyde) and hourly operational limits were established in 2002 (SMOP X001-X005) when the facility was first permitted as a SMOP-by-rule facility under Title V and was considered a minor source for PSD. In 2004, the operational limits established in 2002 were increased and combined with all units (SMOP X006-X010 repermitted from X001-X005) to remain below Title V major source thresholds. In 2007, operational limits were established for Unit Nos. H1-P100, H1-P200 (SMOP No. X011), and Unit Nos. P2-H100, P2-H200 (SMOP No. X012) to maintain the facility-wide potential emissions of CO below the Title V major

source threshold. In 2010, Bay Gas expanded the existing storage capacity with two additional underground salt caverns and increased the hourly operational limit on all engines with the issuance of Air Permit Nos. X013-X019. As a result, the facility became a major source for carbon monoxide (CO) and nitrogen oxides (NO_x) under Title V regulations and remained a synthetic minor source for carbon monoxide (CO) and nitrogen oxides (NO_x) under PSD regulations. With the increased hourly operational limits, the facility-wide potential emissions remained below the major source threshold for HAPs. Additionally, the limits for Air Permit Nos. X015-X016 were removed. In 2012, Bay Gas modified plans that were originally established in the 2010 permitting action. The facility revised the PSD SMS hourly operational limits which combined and increased the limits for Unit Nos. C-100, C-101 (AP X020), C-201, C-202 (AP X021), C-200 (AP X022), and C-7400 (AP X023). PSD SMS operational limits were established for Skid No.1 including Reboiler No.1 (AP X025) and Skid Nos. 2,3, and 4 and Reboiler Nos. 2,3, and 4 (AP X026). Air Permit No. X025 revised/established operational/emission limit(s) for Skid No. 1. Air Permit No. X026 combined the hourly operational limits for Skid Nos. 2, 3, and 4. The modification of limits associated with the permitting action that occurred in 2012 were conducted to correctly represent the facility prior to the issuance of the facility's initial Title V Major Source Operating Permit.

Plant-Wide Potential to Emit (PTE)

Pollutant	PTE (TPY)
$PM/PM_{10}/PM_{2.5}$	5.41
NO_x	158.22
CO	222.34
SO_2	0.45
VOC	63.51
Total HAP	14.43
CO_2e	90,584.00

Applicability: Federal Regulations

Title V

This facility is considered a major source under Title V regulations because the potential emissions for carbon monoxide (CO) and nitrogen oxides (NO_x) exceed the 100 TPY major source threshold. This facility is considered a synthetic minor source for Hazardous Air Pollutants (HAP) because Bay Gas is subject to hourly operational limits on the following units: CE Nos. 1 and 2 (limited to 10,500 hours/year combined), CE Nos. 4 and 5 (limited to 10,500 hours/year combined), CE Nos. 3 and 12 (limited to 10,500 hours/year combined), Skid No. 1 (limited to 3,000 hours/year), Skid No. 2, 3, and 4 (limited to 9,000 hours/year combined), and Emergency Generator Engine Nos. 1 and 3 (limited to 500 hours/year each). Based on these operational limits, the 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 listed 28 major source categories; therefore, the applicable major source threshold is 250 TPY. This facility is considered a synthetic minor source under PSD regulations because the facility-wide potential emissions for NO_x and CO each exceed 250 TPY. CE Nos. 1 and 2 are subject to a

10,500 hours per year combined operational limit that was established in 2010 when the facility expanded with the addition of Cavern Nos. 4 and 5. The limits were retained in 2012 under Air Permit No. X020, to remain under anti-PSD limits to avoid exceeding the PSD thresholds for NO_x and CO. CE Nos. 4 and 5 are subject to a 10,500 hours per year combined operational limit that was established in 2010, retained in 2012 under Air Permit No. X021, to remain under anti-PSD limits to avoid exceeding the PSD thresholds for NO_x and CO. CE Nos. 3 and 12 are subject to a 10,500 hours per year combined operational limit that was established in 2010, retained in 2012 under Air Permit Nos. X022 and X023, to remain under PSD thresholds for NO_x and CO. Skid No. 1 is subject to a 3,000 hours per year operational limit that was established in 2012 under Air Permit No. X025, to remain under anti-PSD limits to avoid exceeding the PSD thresholds for NO_x and CO. Skid Nos. 2, 3, and 4 are subject to a 9,000 hours per year combined operational limit that was established in 2012 under Air Permit No. X026, to remain under anti-PSD limits to avoid exceeding the PSD thresholds for NO_x and CO. Emergency Generator Engine Nos. 1 and 3 are each subject to an operational limit of 500 hours per year that was established in 2010, and retained in 2012 under Air Permit No. X019, to remain under anti-PSD limits to avoid exceeding the PSD thresholds for NO_x and CO.

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (Subpart Dc) [Adopted by reference at ADEM Administrative Code r. 335-3-10-.02(c)]

Due to the date of installation (installed after the June 9, 1989, applicability date) and the size of the withdrawal gas heaters (≥10 MMBtu/hr), Heater Nos. 1-5 are each subject to Subpart Dc. Each of the heaters are exclusively natural gas-fired; therefore, the heaters are subject to the notification and recordkeeping requirements specified in 40 CFR §60.48c(a) and§60.48c(g), respectively. Bay Gas is required to record and maintain records of the amount of fuel burned during each calendar month. Due to their size, the following units are not subject to Subpart Dc:

- 1.7 MMBtu/hr TEG Reboiler Skid No. 1(H-131)
- 2.0 MMBtu/hr TEG Reboilers Skid No. 2 (H-7800, H-130, and H-230)
- 1.3 MMBtu/hr Fuel Gas Heater Skid No. 4 (H-7860)

40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE) (Subpart IIII) [Adopted by reference at ADEM Admin. Code r. 335-3-10-.03(87)]

Subpart IIII applies to owners/operators of stationary CI ICE that commence construction after July 11, 2005, and are manufactured after April 1, 2006, in accordance with 40 CFR §60.4200(a)(2)(i). The 755 hp diesel-fired Emergency Generator Engine No. 3 is subject to this Subpart because the unit was constructed and manufactured on October 31, 2007, after the respective applicability dates.

Emission Limitations

In accordance with 40 CFR §60.4205(b), owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in 40 CFR §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. According to the emission standards under this section, specifically 40 CFR §60.4202(a)(2), the engine is required to be certified to meet the Tier 2,

new nonroad CI engine requirements in 40 CFR Part 1039, Appendix I, for all pollutants and the smoke standards in 40 CFR §1039.105. The emergency engine must be certified to meet a NO_x + NMHC emission standard of 6.4 g/kW-hr (4.8 g/hp-hr), a CO emission standard of 3.5 g/kW-hr (2.6 g/hp-hr), and a PM emission standard of 0.20 g/kW-hr (0.15 g/hp-hr). In accordance with 40 CFR §1039.105, exhaust opacity from the emergency engine must not exceed 20% during the acceleration mode, 15% during the lugging mode, and 50% during the peaks in either the acceleration or lugging modes. According to 40 CFR §60.4206, Bay Gas must operate and maintain the emergency engine in a manner that meets these emission standards over the entire life of the engine.

Compliance Requirements

To demonstrate compliance with the operational limitations, Bay Gas must maintain records of the date, time, duration, and purpose of operation each time the generator engine is operated as specified in 40 CFR §60.4214(b). 40 CFR §60.4211(f) limits the operation of the emergency engine for maintenance checks and readiness testing to no more than 100 hours per year. In accordance with 40 CFR §60.4207(b), to demonstrate compliance with the fuel limitations, Bay Gas must use diesel fuel that meets the requirements of 40 CFR §1090.305 for non-road diesel fuel. These standards require the use of diesel fuel that meets the ULSD per-gallon standards of max sulfur content of 15 ppm, and either minimum cetane index of 40 or max aromatic content of 35 percent by volume. Bay Gas is required to maintain records of the sulfur content and either the Cetane index or aromatic content of the diesel fuel that is burned in the emergency engine. All records must be maintained in a form suitable for inspection and must be retained for a period of five years from the date of generation, as required by 40 CFR §60.7(f). The emergency engine must be equipped with a non-resettable hour meter as specified in 40 CFR §60.4209, and based on the applications, this generator engine is equipped with a non-resettable hour meter.

Testing Requirements

There are no testing requirements for Emergency Generator Engine No. 3 because the engine is certified by the manufacturer, as required by 40 CFR §60.4211(c).

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)]

In accordance with 40 CFR §60.4230(a)(4)(i), Compressor Engine (CE) No. 12 is subject to this Subpart since construction commenced (date ordered) after June 12, 2006 (ordered February 2012), and the engine was manufactured on or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 hp. It is classified as a non-emergency spark ignition (SI) natural gas-fired internal combustion engine (ICE) greater than or equal to 500 hp.

Emission Limitations

In accordance with 40 CFR §60.4233(e) and Table 1, CE No. 12 is subject to a NO_x emission limit of 1.0 g/hp-hr or 82 ppmvd at 15% O_2, a CO emission limit of 2.0 g/hp-hr or 270 ppmvd at 15% O_2, and a VOC emission limit of 0.7 g/hp-hr or 60 ppmvd at 15% O_2. In accordance with 40 CFR §60.4234, Bay Gas must operate and maintain the engine in a manner that meets these applicable emission standards over the entire life of the engine. Based on the applications submitted by Bay Gas, CE No. 12 is not certified by the manufacturer to meet the applicable emissions standards under

this Subpart; therefore, Bay Gas chose to install a catalytic converter on the engine to meet the applicable emission standards.

Compliance Requirements

Bay Gas demonstrates compliance with the applicable NO_x, CO, and VOC emission limits through performance testing (see *Testing Requirements* section below). 40 CFR §60.4243(b)(2)(ii) requires Bay Gas to keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practices for minimizing emissions.

Testing Requirements

Performance test requirements and procedures are outlined in 40 CFR §60.4244. CE No. 12 is not a certified engine, so in accordance with 40 CFR §60.4243(b)(2)(ii), Bay Gas is required to conduct performance tests every 8,760 hours of operation or every three years, whichever comes first. Bay Gas last completed a performance test on February 9, 2023, which demonstrated compliance with the applicable NO_x, CO, and VOC emission limits.

Notification, Reports, and Records

40 CFR §60.4245(a)(1) requires owners and operators of all stationary SI ICE subject to Subpart JJJJ to keep records of all notifications submitted and all documentation supporting any notification. In addition, 40 CFR §60.4245(a)(2) requires Bay Gas to maintain records of all maintenance conducted on the engine. 40 CFR §60.4245(b) requires that owners and operators of stationary SI emergency ICE greater than 500 hp manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. 40 CFR §60.4245(d) requires that a copy of all performance tests be submitted to the Air Division within 60 days after the test has been completed. All records required under Subpart JJJJ must be retained for at least two years from the date of generation and made available for inspection upon request. However, because this facility operates under a Title V MSOP, all records required under this Subpart must be retained for at least five years from the date of generation of each record and be readily available for inspection upon request.

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 all units at this facility were installed prior to the August 23, 2011, applicability date of this regulation and have not been reconstructed or modified; 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 all units at this facility were installed prior to the September 18, 2015, applicability date of this regulation and have not been reconstructed or modified; 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)

The compressors associated with all units at this facility were installed prior to the December 6, 2022, applicability date of this regulation and have not been reconstructed or modified; therefore, this facility is not subject to this Subpart.

National Emission Standards for Hazardous Air Pollutants (NESHAP/MACT)

40 CFR Part 63, Subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities (Subpart HH) [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(33)]

The TEG skids with reboilers are not subject to this Subpart because, as stated in the application, Bay Gas does not store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user as specified in 40 CFR §63.760(a)(3).

40 CFR Part 63, Subpart HHH, National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities (Subpart HH) [Adopted by reference in ADEM Admin. Code r. 335-3-11-.06(59)]

The TEG skids with reboilers are not subject to this Subpart because the facility is not a major source of HAP as specified in 40 CFR §63.1270(a).

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)]

Non-Emergency Engines

CE No. 12 is considered a new affected source since it was constructed after the June 12, 2006, applicability date for this Subpart. According to 40 CFR §63.6590(c), any new or reconstructed stationary RICE located at an area source of HAP emissions must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart JJJJ. No further requirements would apply to CE No. 12 under Subpart ZZZZ.

CE Nos. 1-5 are considered existing sources under this Subpart because the engines were constructed before the June 12, 2006, applicability date. CE Nos. 1-5 are each classified as existing 4SLB SI RICE greater than 500 hp located at an area source of HAP. Based on information provided by Bay Gas in the application, CE Nos. 1-5 each currently meet the definition of remote stationary RICE in 40 CFR §63.6675.

The following are the applicable requirements of Subpart ZZZZ for CE Nos. 1-5:

Compliance Requirements

According to 40 CFR §63.6603(a), Bay Gas must comply with the applicable requirements in Table 2d, Item 8 to Subpart ZZZZ for non-emergency, non-black start 4SLB remote stationary RICE greater than 500 hp located at an area source of HAP emissions, which includes the following:

- Change oil and filter every 2,160 hours of operation or within one year plus 30 days of the previous change, whichever comes first; or participate in the oil analysis program as listed in 40 CFR §63.6625(j);
- Inspect spark plugs every 2,160 hours of operations or within one year plus 30 days of the previous inspection, whichever comes first, and replace as necessary; and
- Inspect all hoses and belts every 2,160 hours of operation or within one year plus 30 days of the previous inspection, whichever comes first, and replace as necessary.

In accordance with 40 CFR §63.6603(f), Bay Gas must evaluate the status of each stationary RICE every 12 months to determine if CE Nos. 1-5 each continue to meet the definition of remote stationary RICE as listed in 40 CFR §63.6675. The facility must keep records of the initial and annual evaluations of the status of each of the engines. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE, Bay Gas must comply with all applicable requirements for existing non-emergency, non-black start 4SLB stationary RICE greater than 500 hp located at an area source of HAP that are not remote stationary RICE within one year of the evaluation.

40 CFR §63.6640(a) states that Bay Gas must demonstrate continuous compliance with the applicable operation, work, and management practices according to the methods specified in Table 6 of Subpart ZZZZ. Bay Gas is subject to the following requirements specified in Table 6, Item 9:

- Operate and maintain the stationary RICE 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.

Testing Requirements

There are no initial or subsequent performance testing requirements applicable to CE Nos. 1-5.

Continuous Compliance Monitoring

According to 40 CFR §63.6605(a) and (b), Bay Gas must be in compliance with the applicable emission limitations, operating limitations, and other requirements in this Subpart at all times. Bay Gas must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

40 CFR §63.6625(h) requires Bay Gas to minimize the engines' time spent at idle during startup and minimize the engines' startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

Notifications, Reports, and Recordkeeping

Bay Gas must submit and maintain all notifications and reports (and supporting documentation) as well as records pertaining to initial and continuous compliance for a period of 5 years from the date of each record or report as required in 40 CFR §63.6603(f), 40 CFR §63.6655, 40 CFR §63.6660 and Table 6 of Subpart ZZZZ. Records must be maintained in a suitable form and readily available for expeditious review for at least five years after the date of generation of each record. Bay Gas is required to evaluate the surrounding area every 12 months to determine each RICE's remote status. If any RICE no longer meets the criteria for remote stationary RICE, Bay Gas must comply with the requirements for non-remote RICE within one year of making that determination. In addition, Bay Gas is required to retain on file the annual evaluation of the surrounding area for determining if the RICE are classified as remote or non-remote.

Emergency Engines

Emergency Generator Engine Nos. 1 and 3 are each considered affected sources under Subpart ZZZZ, which applies to both major and area sources of HAP emissions. Emergency Generator Engine No. 3 is considered a new affected source since it was constructed after the June 12, 2006, applicability date for this Subpart. According to 40 CFR §63.6590(c), any new or reconstructed stationary RICE located at an area source of HAP emissions must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements would apply to Emergency Generator Engine No. 3 under Subpart ZZZZ.

Emergency Generator Engine No. 1 is classified as an existing emergency diesel-fired CI RICE less than or equal to 500 hp located at an area source of HAP. In accordance with 40 CFR §63.6595(a)(1), Bay Gas is required to meet the requirements of this Subpart and Subpart A for this RICE.

The following are the applicable requirements of Subpart ZZZZ for Emergency Generator Engine No. 1:

Compliance Requirements

According to 40 CFR §63.6603(a), the emergency engine is subject to the requirements of Table 2d, Item 4 to this Subpart for existing emergency CI RICE located at an area source, which includes the following:

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

Bay Gas is required to maintain records of the hours of operation to ensure that the engine continues to meet the definition of an emergency unit. In accordance with 40 CFR §63.6655(f), Bay Gas 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.

In accordance with 40 CFR §63.6625(e)(3) and Item 9 of Table 6 to Subpart ZZZZ, Bay Gas is required to operate and maintain the emergency engine according to the manufacturer's emission-related written instructions or develop a maintenance plan that provides 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.

Testing Requirements

There are no initial or subsequent performance testing requirements applicable to this Emergency Generator Engine No. 1.

Notifications, Reports, and Records

Bay Gas must demonstrate continuous compliance with the operating limitations by keeping records specified in 40 CFR §63.6655(d) and Table 6 to Subpart ZZZZ. According to 40 CFR §63.6655(e)(2), Bay Gas must keep records of the maintenance conducted on the existing emergency stationary RICE to demonstrate the engine and after-treatment control device (if any) is operated and maintained according to their own maintenance plan. 40 CFR §63.6655(f)(2), requires Bay Gas to maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter. Bay Gas 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. Records must be maintained in a suitable form and readily available for expeditious review for at least five years after the date of generation of each record.

Mandatory Greenhouse Gas Reporting

40 CFR Part 98, Subpart A General Provision

The facility is a listed source category in Table A-4 as defined in 40 CFR §98.230(a)(5), it is 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 (90,913 TPY) of CO_2e or more per year from all stationary fuel combustion sources combined. Bay Gas 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), Bay Gas 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(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 compressor engines, emergency generator engines, heaters, and TEG reboilers 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"

Bay Gas is located in Washington County which is classified as a Class II area for sulfur dioxide (SO_2) emissions. However, in accordance with 335-3-4-.03(4), new sources (built after January 18, 1972) are subject to the rules and regulations for Class I Counties regardless of their location. Although the compressor engines and emergency generator 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. The TEG reboilers and heaters are considered fuel burning equipment and each unit is subject to the State particulate emission standard found in ADEM Admin. Code r. 335-3-4-.03(1) and is subject to the applicable emission rate for a new source as calculated by the equation $E = 1.38H^{-0.44}$, where E = emissions in lb/million BTU and H = heat input in millions of BTU/hr. Each of the TEG reboilers and heaters comply with the particulate emission standard because these units are each fired with natural gas.

ADEM Admin. Code r. 335-3-5-.01, "Control of Sulfur Compound Emissions: Fuel Combustion"

Bay Gas is located in Washington County which is classified as a Class II area for sulfur dioxide (SO_2) emissions. Although the compressor engines and emergency generator 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. The TEG reboilers and heaters are each considered a fuel combustion source that meets the definition of fuel burning equipment and each unit is subject to the SO_2 emission limitation for a Category II County found in ADEM Admin. Code r. 335-3-5-.01(1)(b), which limits each unit to 4.0 lb/MMBtu heat input. Each of the TEG reboilers and heaters comply with the SO_2 emission standard because these units are each fired with natural gas.

Emission Testing and Monitoring

Bay Gas is required to certify on a semiannual basis that only natural gas or diesel fuel meeting the sulfur limitation was burned in the reciprocating engines, TEG Skid reboilers, heaters, and the emergency generator engines 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 these fuels.

Because the reboilers and heaters only burn natural gas, they would be expected to be able to comply with the applicable State TSP and SO_2 allowable emission rates, as well as the visible emission standards. Therefore, no emission testing would be required for these units. For the withdrawal heaters, Bay Gas will be required to calculate the fuel usage on a monthly as required by 40 CFR §60.48c(g).

In accordance with 40 CFR §60.4243(b)(2)(ii), to demonstrate compliance with the applicable Subpart JJJJ NO_x, CO, and VOC emission limits for CE No. 12, and to satisfy the Title V periodic monitoring requirement, Bay Gas is required to conduct NO_x, CO, and VOC performance tests every 8,760 hours of operation or every three years, whichever comes first.

Recordkeeping and Reporting

In addition to the records and reporting requirements specified in 40 CFR Part 60, Subparts Dc, JJJJ, and IIII, and 40 CFR Part 63, Subpart ZZZZ, Bay Gas is required to submit a semiannual certification that only natural gas or diesel fuel meeting the applicable sulfur limitations was fired in CE Nos. 1-5 and 12, Heater Nos. 1-5, TEG Reboiler Nos. 1-4, and Emergency Generator Engine Nos. 1 and 3 in each unit during the respective reporting period to demonstrate compliance with the visible emissions requirements of ADEM Admin. Code r. 335-3-4-.01(1). In addition, records of the monthly and 12-month rolling total fuel oil usage for the withdrawal heaters are required to be maintained to demonstrate compliance with 40 CFR§ 60.48c. Bay Gas must submit a semiannual report certifying that only natural gas meeting the definition in 40 CFR §60.331(u) was fired in these units during the reporting period to demonstrate compliance with ADEM Admin. Code r. 335-3-16-.05(c). Bay Gas 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. In accordance with ADEM Admin. Code r. 335-3-16-.05(c)2(ii), all required records shall 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 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.

Although CE Nos. 3 and 12 utilize active control devices to meet an emission standard, these units would not be subject to the CAM requirements specified in 40 CFR Part 64 because of the exemption specified in 40 CFR §64.2(b)(1)(i). Specifically, these units are exempt from CAM requirements because CE No. 3 is subject to 40 CFR Part 63, Subpart ZZZZ, and CE No. 12 is subject to 40 CFR Part 60, Subpart JJJJ, which are standards that meet this exemption.

Environmental Justice Screen

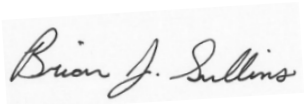
The Draft Permit contains emission limits based on state and federal regulations that are protective of human health and the environment. In addition, the Department has a robust public engagement that utilizes a number of tools, such as EPA's EJ Screen: Environmental Justice Screening and Mapping Tool, to ensure that local residents and stakeholders are provided a meaningful opportunity to participate in the permitting process. The Department performed an EJ Screen Analysis and determined that the permitting action is a Title V Renewal which would not result in a change of emissions, additional public outreach was not performed. (http://www.adem.alabama.gov/Moreinfo/pubs/ADEMCommunityEngagement.pdf).

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

I recommend that Bay Gas's Title V MSOP (108-0017) 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 period.



Brian J. Sullins
Chemical Branch
Natural Resources Section
Agriculture/Gas Unit
Air Division

April 21, 2025
Date

19004 108-0017 129 04-21-2025 T5SOB BJS 2REN