

PERMIT AMENDMENT NO. 4925-063-0083-S-05-1
ISSUANCE DATE:



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality – Permit Amendment

In accordance with The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to or in effect under that Act, Permit No. 4925-063-0083-S-05-1 issued on October 28, 2020 to:

Facility Name: Atlanta Gas Light Company – Riverdale LNG Plant

Facility Address: 7790 Highway 85
Riverdale, Georgia 30274, Clayton County

Mailing Address: P.O. Box 4569
Atlanta, Georgia 30302

Facility AIRS Number: 04-13-063-0083

for the following: **The continued operation of a liquefied natural gas plant, replacement of six Vaporizer Heaters with four 73.9 MMBtu/hour Vaporizer Heaters and the replacement of a natural gas-fire fire pump with an emergency generator and electric fire pump. This Permit is issued for the purpose of establishing practically enforceable emission limitations such that the facility will not be considered a major source with respect to Title V of the Clean Air Act Amendments of 1990.**

is hereby amended as follows: **Construction and operation of a liquefied gas pump engine and two electric generators. This Permit is issued for the purpose of establishing practically enforceable emission limitations such that the facility will not be considered a major source with respect to Title V of the Clean Air Act Amendments of 1990.**

Reason for Amendment: 28830, received on April 14, 2023.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 10 page(s).

This Permit Amendment is hereby made a part of Permit No. 4924-063-0083-S-05-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.



Jeffrey W. Cown
Environmental Protection Division

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2. Allowable Emissions

MODIFIED CONDITIONS

- 2.2 The Permittee shall not fire any fuel other than natural gas in Vaporizer Heaters (ID Nos. VH7 through VH12), Regeneration Heater No. 3 (ID No. RH3), Generators (ID Nos. G1 through G3), Booster Pump Engines (ID Nos. BPD through BPF), LNG Pump Engines (ID Nos. **PB** through **PF** and **PA1**), Boil-Off Compressor Engines (ID Nos. BOA2 and BOB2), Emergency Generator (ID No. EG1), and **Electric Generator Turbines (ID Nos. GT1 and GT2).**

[NSR Avoidance, and 391-3-1-.02(2)(g)2(subsumed)]

- 2.4 The Permittee shall not operate the following equipment in excess of the operating limits listed below for any 12 consecutive month period:

Source Code	Description	NOx Emission Limit	Operating Limit	Allowable NOx Emissions (tpy)
VH7	Vaporizer Heater No. 7	194 lb/MMscf natural gas	21.69 MMscf/yr	None Applicable
VH8	Vaporizer Heater No. 8			
VH9	Vaporizer Heater No. 9			
VH10	Vaporizer Heater No. 10	30 ppm @ 3% O2, dry basis during period May 1 thru September 30	41.66 MMscf/yr	None Applicable
VH11	Vaporizer Heater No. 11			
VH12	Vaporizer Heater No. 12			
RH3	Regeneration Heater No. 3	30 ppm @ 3% O2, dry basis during period May 1 thru September 30	N/A	None Applicable
G1	Generator Engine No. 1	44.0 ppmv at 15% O2	N/A	21.26 Total for Group GPB1
G2	Generator Engine No. 2	44.0 ppmv at 15% O2		
G3	Generator Engine No. 3	44.0 ppmv at 15% O2		
PB	LNG Pump Engine B	3.23 lbs/hr	2,500 hr/yr	
PC	LNG Pump Engine C	3.23 lbs/hr		
PD	LNG Pump Engine D	3.23 lbs/hr		
PE	LNG Pump Engine E	3.23 lbs/hr		
PF	LNG Pump Engine F	3.23 lbs/hr		
PA1	LNG Pump Engine A1	3.44 lbs/hr		
BOA2	Boil-off Gas Compressor Engine A	44.0 ppmv at 15% O2	N/A	None Applicable
BOB2	Boil-off Gas Compressor Engine B	44.0 ppmv at 15% O2	N/A	None Applicable
BPD	Booster Pump D	1.0 g/hp-hr (82 ppmv @ 15% O2)	5.33 MMscf/yr	None Applicable
BPE	Booster Pump E			
BPF	Booster Pump F			
EG1	Emergency Generator Engine No. 1	2.0 g/hp-hr (160 ppmv @ 15% O2)	200 hrs/yr	None Applicable
GT1	Electric Generator Turbine No. 1	25 ppmv @ 15% O2	N/A	None Applicable
GT2	Electric Generator Turbine No. 2	25 ppmv @ 15% O2	N/A	None Applicable

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- 2.12 The Permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as found in 40 CFR 63, Subpart A – “General Provisions,” and Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,” for the operation of the Generators (ID Nos. G1 through G3), Booster Pump Engines (ID Nos. BPD through BPF), LNG Pump Engines (ID Nos. **PB** through PF **and PA1**), Boil-Off Gas Compressor Engines (ID Nos. BOA2 and BOB2), and the Emergency Generator (ID No. EG1).
[40 CFR 63 Subpart A and Subpart ZZZZ]
- 2.13 The Permittee shall comply with the following management practice standards for the operation of the LNG Pump Engines ID Nos. **PB** through PF **and PA1**), each:
[40 CFR 63.6603(a) and Item 10 of Table 2d to 40 CFR 63 Subpart ZZZZ]
- a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first, except as noted in Condition 2.19.
 - b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first.
 - c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.
- 2.15 For the operation of the Generators (ID Nos. G1 through G3), Boil-Off Gas Compressor Engines (ID Nos. BOA2 and BOB2), and the LNG Pump Engines (ID Nos. **PB** through PF **and PA1**), the Permittee shall:
- a. Comply with the applicable requirements specified in Conditions 2.13, 2.14, and 2.20 at all times except during periods of startup.
[40 CFR 63.6605(a)]
 - b. 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.
[40 CFR 63.6625(h)]
 - c. Operate and maintain the engines, 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 63.6605(b)]
- 2.17 The Permittee shall limit the hours of operation of the LNG Pump Engine group (ID Nos. **PB** through PF **and PA1**), such that the total hours of operation of the specified emission group do not equal or exceed 2,500 hours per year during any twelve consecutive months.
[Title V Avoidance]

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- 2.18 The Permittee shall operate and maintain the LNG Pump Engines (ID Nos. **PB** through **PF and PA1**) according to the engine manufacturer's emission-related written instructions or develop 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(e)(3) and (8), 40 CFR 63.6640(a), and Item 9 of Table 6 to 40 CFR 63 Subpart ZZZZ]

NEW CONDITIONS

- 2.28 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A – “General Provisions” and 40 CFR 60 Subpart KKKK – “Standards of Performance for Stationary Combustion Turbines,” for operation of Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2).
[40 CFR 60 Subpart A and Subpart KKKK]
- 2.29 The Permittee shall not cause to be discharged into the atmosphere from Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2) any gases which contain nitrogen oxides in excess of 25 parts per million by volume on a dry basis (ppmvd) corrected to 15 percent oxygen (O₂).
[Table 1 of 40 CFR 60 Subpart KKKK and 40 CFR 60.4320]
- 2.30 The Permittee shall not combust in Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2) any natural gas with a sulfur content that would allow emissions in excess of 26 ng SO₂/J (0.060 lb SO₂ per MMBtu) of heat input.
[40 CFR 60.4330(a)(2)]
- 2.31 The Permittee shall operate and maintain Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2) in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction.
[40 CFR 60.4333(a)]
- 2.32 The Permittee shall not cause, let, suffer, permit, or allow the emissions of nitrogen oxides (NO_x), from Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2), to exceed 30 ppm @ 15 percent O₂, dry basis during the ozone season. For purposes of this condition, the ozone season is defined as the time period beginning May 1 and ending September 30 of each year.
[391-3-1-.02(2)(mmm)]

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5. Monitoring

MODIFIED CONDITION

5.2 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated parameters on the following equipment. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

[391-3-1-.02(6)(b)1]

a. A non-resettable hour meter for continuously measuring and recording the cumulative total hours of operation for the Booster Pump Engines (ID Nos. BPD, BPE, and BPF). The monthly cumulative and net operating hours shall be recorded in accordance with Condition 7.3.

[391-3-1-.02(6)(b)1]

b. A non-resettable hour meter for continuously measuring and recording the cumulative total hours for each LNG Pump Engine (ID Nos. **PB** through PF **and PA1**). The monthly cumulative and net operating hours shall be recorded in accordance with Condition 7.3.

[391-3-1-.02(6)(b)1]

c. A non-resettable hour meter to continuously record and track the hours operated during emergency service and the hours operated in non-emergency service (maintenance and/or testing), to record the reason the engine was in operation during those times, and to record the cumulative total hours of operation for the Emergency Generator (ID No. EG1).

[391-3-1-.02(2)(mmm) and 40 CFR 60.4209(a)]

NEW CONDITIONS

5.8 **The Permittee shall monitor the emissions of NO_x from Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2), during the period from May 1 through September 30 each year by performing a test measurement to demonstrate that the NO_x concentrations corrected to 15 percent oxygen are below the applicable standard. The test measurements shall use the following procedures:**

[391-3-1-.02(6)(b)1 and PTM Section 2.120]

a. **The measurements shall be performed no earlier than March 1 and no later than May 1 of each calendar year. Should an affected source become operational during the period from May 1 to September 20, a measurement shall be performed within the first 120 hours of operation.**

b. **The measurement shall be performed using the manufacturer recommended settings for reduced NO_x emissions.**

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- c. The Permittee shall carry out a measurement consisting of a minimum of three test measurements to demonstrate that the average emissions are less than or equal to the applicable standards. Each test measurement shall be a minimum of 30 minutes in length. One test measurement shall be conducted at the minimum load during the past 12 months, one test measurement at the highest load operated during the past 12 months, and one test measurement at the average load operated during the past 12 months.
- d. All measurements of NO_x emissions and oxygen concentrations shall be conducted using the procedures of the American Society for Testing and Materials Standard (ASTM) Test Method for Determination of NO_x, Carbon Monoxide (CO), and Oxygen Concentrations in emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, ASTM D 6522; or procedures of Gas Research Institute Method GRI-96-0008, EPA/EMC Conditional Test Method (CTM-30) Determination of NO_x, Carbon Monoxide (CO), and Oxygen Concentrations in emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers or the Procedures of EPA Reference Methods 7E and 3A.
- e. The Permittee shall maintain records of all measurements performed in accordance with this section. These records shall indicate the date and time the measurements were performed and the NO_x and oxygen values determined during the measurements.
- f. Following the measurements, from the period May 1 through September 30 of each year, the Permittee shall operate the affected facility using the settings determined during the annual measurement. The Permittee shall certify that no adjustments have been made to the affected facility by the owner, operator and/or any third party since the measurements in paragraph c. of this condition were conducted. This certification shall be made in writing no later than October 15 of each year and shall be maintained with the records required to be maintained in paragraph e of this condition.

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6. Performance Testing

- 6.7 Within 60 days after achieving the maximum production rate at which Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2) will be operated, but no later than 180 days after the initial startup of each combustion turbine, the Permittee shall conduct the initial performance tests for NO_x emissions from Generator Turbines Nos. 1 and 2. Subsequent NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). Performance testing for NO_x emissions shall be conducted using the methodologies as specified in 40 CFR 60.4400(a). If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, the Permittee must resume annual performance tests.
[40 CFR 60.4340(a) and 40 CFR 60.4400(a)]**

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7. Notification, Reporting and Record Keeping Requirements

MODIFIED CONDITION

7.1 The Permittee shall submit a written report containing any deviations as described in this permit and any monitor malfunctions for each semiannual period ending June 30 and December 31 of each year. All reports shall be postmarked by August 29 and February 28, respectively following each reporting period. In the event that there have not been any deviations or malfunctions during a reporting period, the report should so state. For the purpose of reporting deviations in the report, the following deviation shall be reported:

[391-3-1-.02(6)(b)1]

- a. Any NO_x emissions from any Generator (ID Nos. G1 through G3) or Boil-Off Gas Compressor Engine (ID Nos. BOA2 and BOB2), measured in accordance with Condition 6.2, that exceeds 44.0 ppmv corrected to 15 percent oxygen.
- b. Any NO_x emissions from the Vaporizer Heaters (ID Nos. VH9 through VH12) or the Regeneration Heater No. 3 (ID No. RH3), that exceeds 30.0 ppmv corrected to 15 percent oxygen during the period of May 1 through September 30.
- c. Any twelve consecutive month period during which the total hours of operation for any emission unit or group of emission units (when the total hours of operation limit applies to a group of units), as determined in accordance with Condition 7.3, exceeds the allowable hours of operation specified in Conditions 2.17 and 2.21.
- d. Any twelve consecutive month period during which the total NO_x emissions (tons) from the Generators (ID Nos. G1 through G3) and the LNG Pump Engines (ID Nos. **PB** through **PF and PA1**) exceed 21.26 tons.
- e. Any twelve consecutive month period during which the total amount of natural gas fired in the Vaporizer Heaters (ID Nos. VH7 and VH8), as determined in accordance with Condition 7.4, exceeds 21.69 million cubic feet.
- f. Any twelve consecutive month period during which the total amount of natural gas fired in the Vaporizer Heaters (ID Nos. VH9 through VH12), as determined in accordance with Condition 7.4, exceeds 41.66 million cubic feet.
- g. Any twelve consecutive month period during which the total amount of natural gas fired in the Booster Pump Engines (ID Nos. BPD, BPE, and BPF), as determined in accordance with Condition 7.7, exceeds 5.33 million cubic feet.
- h. Any four-hour period during which the average temperature at the inlet to any catalytic converter (ID Nos. CG01 through CG03, BA2C, and BB2C), as determined in accordance with Condition 5.3c, is less than 750°F or greater than 1,250°F.
- i. Any instance that the Permittee does not meet the requirements specified in Condition 2.11. [391-3-1-.02(2)(vv)]

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- j. Any failure to conduct the tune-up required by Condition 5.4, or any operation of the Regeneration Heater No. 3 (ID No. RH3) or the Vaporizer Heaters (ID Nos. VH9 through VH12) during the ozone season (May 1 – September 30), reported to not be operated in accordance with Condition 5.4h.
[391-3-1-.02(2)(III)]
- k. Any instance that the Permittee does not meet the requirements specified in Condition 2.14 and 2.15.
[40 CFR 63.6640(b)]

7.2 DELETED

- 7.3 The Permittee shall use the hour meters required by Condition 5.2 to determine and record the following:
[NSR Avoidance – 40 CFR 52.21, 391-3-1-.02(6)(b)1, and 391-3-1-.02(2)(mmm)]

- a. The cumulative total hours of operation for each LNG Pump Engine (ID Nos. **PB** through **PF and PA1**), each Booster Pump Engine (ID Nos. BPD, BPE, and BPF), and the Emergency Generator (ID No. EG1), as indicated by the hour meter, at the end of every calendar month.
- b. The net operating hours for each LNG Pump Engine (ID Nos. **PB** through **PF and PA1**), each Booster Pump Engine (ID Nos. BPD, BPE, and BPF), and the Emergency Generator (ID No. EG1), during every calendar month.
- c. The total combined operating hours for each LNG Pump Engine group (**PB** through **PF and PA1**, combined), each Booster Pump Engine (ID Nos. BPD, BPE, and BPF) and the Emergency Generator (ID No. EG1), during every calendar month.
- d. The total combined operating hours for each LNG Pump Engine group (**PB** through **PF and PA1**, combined) and each Booster Pump Engine (ID Nos. BPD, BPE, and BPF), for the 12 consecutive month period ending with each calendar month.
- e. The total combined operating hours, the total emergency service operating hours and the total non-emergency service operating hours for the Emergency Generator (ID No. EG1), during every calendar month. Record of the reason the engine was in operation during those times shall be included in the record.
- f. The total combined operating hours, the total emergency service operating hours and the total non-emergency service operating hours for the Emergency Generator (ID No. EG1), for the 12 consecutive month period ending with each calendar month. Record of the reason the engine was in operation during those times shall be included in the record.

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7.5 The Permittee shall submit, with the report required by Condition 7.1, a semiannual report that contains the following records. The records shall be available for inspection or submittal to the Division upon request and contain:

[391-3-1-.02(6)(b)1]

- a. The total combined operating hours for each LNG Pump Engine group (ID Nos. **PB** through **PF and PA1**, combined), calculated in accordance with Condition 7.3, for the 12 consecutive month period ending with each calendar month in the semiannual period.
- b. The total volume of natural gas burned in the Vaporizer Heaters (ID Nos. VH7 and VH8), combined, calculated in accordance with Condition 7.4, for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.
- c. The total volume of natural gas burned in the Vaporizer Heaters (ID Nos. VH9 through VH12), combined, calculated in accordance with Condition 7.4, for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.

7.12 For the operation of the Generators (ID Nos. G1, G2, and G3), the Boil-Off Gas Compressor Engines (ID Nos. BOA2 and BOB2), and the LNG Pump Engines (ID Nos. **PB** through **PF and PA1**), the Permittee shall keep and maintain the following records:
[391-3-1-.02(6)(b)1 and 40 CFR 63.6655(a)]

- a. A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
- b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
- c. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
- d. Records of all required maintenance performed on the air pollution control and monitoring equipment.
- e. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 2.15, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

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7.14 The Permittee shall record and maintain the following records: [391-3-1-.02(6)(b)1]

- a. Records that demonstrate continuous compliance with the requirements specified in Condition 2.18.
[40 CFR 63.6655(d) and Item 9 of Table 6 to 40 CFR 63 Subpart ZZZZ]
- b. Records that demonstrate continuous compliance with the requirements specified in Conditions 2.14, 2.20, 5.3c, and 5.7.
[40 CFR 63.6655(d) and Item 15 of Table 6 to 40 CFR 63 Subpart ZZZZ]
- c. Records of the maintenance conducted on the LNG Pump Engines (ID Nos. **PB** through **PF and PA1**), as specified in Condition 2.13.
[40 CFR 63.6655(e)(2) and (3)]

NEW CONDITIONS

- 7.15 The Permittee shall submit notification of the date of construction and actual startup of Electric Generator Turbines Nos. 1 and 2 (ID Nos. GT1 and GT2). The notifications shall be submitted withing 30 days of the event.
[391-3-1-.02(6)(b)1]**
- 7.16 To demonstrate compliance with Permit Condition 2.30, the Permittee shall submit a report containing the following information for each semiannual period ending June 30 and December 31 of each year. All reports shall be postmarked by August 29 and February 28, respectively following each reporting period.
[391-3-1-.02(6)(b)1(i), 40 CFR 60.4365(a) and (b), and 40 CFR 60.4395]**
 - a. **Submit the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content 20 grains of sulfur or less per 100 standard cubic feet and has potential sulfur emissions of equal to or less than 26 ng SO₂ /J (0.060 lb SO₂ /MMBtu) heat input; or**
 - b. **Submit representative fuel sampling data which shows that the sulfur content of the fuel does not exceed 26 ng SO₂ /J (0.060 lb SO₂ /MMBtu) heat input. At a minimum the amount of fuel sampling data specified in 2.3.1.4 or 2.3.2.4 of Appendix D of 40 CFR Part 75 is required.**