

Part 70 Operating Permit Amendment

Permit Amendment No.: 4581-063-0030-V-02-1 **Effective Date:**

Facility Name: **Hartsfield – Jackson Atlanta International Airport**

Facility Address: 6000 North Terminal Parkway, Atrium Suite 430
Atlanta, Georgia 30320 Clayton County

Mailing Address: Department of Aviation, P.O. Box 20509
Atlanta, Georgia 30320

**Parent/Holding
Company:** City of Atlanta

Facility AIRS Number: 04-13-063-00030

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

Construction and operation of 1,102 Brake Horse power (BHP) diesel fired generator (PSG9) and a 1,085 BHP natural gas fired generator (PG10) both will be used for non-emergency situations.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 4581-063-0030-V-02-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 17439 dated June 1, 2007; any other applications upon which this Permit Amendment or Permit No. 4581-063-0030-V-02-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **10** pages.

Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Hartsfield – Jackson Atlanta International Airport (HJAIA) submitted an application for the construction and operation of two reciprocating internal combustion engine generators – a natural gas-burning (propane backup), 1,085.2 brake horsepower (BHP) non-emergency generator (Emission ID PG10) and a diesel fuel burning, 1,102 brake horsepower (BHP) non-emergency generator (Emission ID PSG9). Emissions for each unit are based on an operating hours limit of 700 hours per year. Selective Catalytic Reduction System will be required to be operated at all times to reduce NOx emissions from Emission ID PSG9 and a Catalytic Converter will be required on Emission ID PG10.

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PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Additional Emission Units

Emission Units		Specific Limitations/Requirements			
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	APCD* ID No.	Equipment Group
PSG9	1,102 BHP, Diesel fuel-burning, non-emergency generator	391-3-1-.02(2)(b), 391-3-1-.02(2)(g), 391-3-1-.02(2)(mmm) 40 CFR Part 60 Subpart A 40 CFR Part 60 Subpart III	3.2.2, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.4.2, 3.4.3, 3.4.6, 3.4.7, 3.4.8, 3.4.9, 4.2.11, 5.2.4, 5.2.5, 6.2.3, 6.2.5, 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.19, 6.2.21, 6.2.2	SCR9+	PSG0
PG10	1,085 BHP, Natural gas/Propane-fired, non-emergency generator	391-3-1-.02(2)(b), 391-3-1-.02(2)(g), 391-3-1-.02(2)(mmm)	3.2.2, 3.4.2, 3.4.3, 3.4.6, 3.4.7, 3.4.8, 3.4.9, 4.2.11, 5.2.4, 5.2.5, 6.2.3, 6.2.5, 6.2.8, 6.2.9, 6.2.10, 6.2.11, 6.2.19	CC10+	PSG0

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

+ SCR9 - Selective Catalytic Reduction (SCR), CC10 - Catalytic Converter

* APCD – Air Pollution Control Device

3.2 Equipment Emission Caps and Operating Limits

MODIFIED CONDITIONS

3.2.2 The Permittee shall not discharge or cause the discharge into the atmosphere NOx emissions from the sources in Equipment Groups B000 and PSG0 in excess of 24.9 tons per 12 consecutive month period. For purposes of determining compliance with this condition, NOx emissions shall be determined in accordance with Condition 6.2.5.
[NAA/NSR Avoidance, 391-3-1-.03(2)(c)]

3.3 Equipment Federal Rule Standards

NEW CONDITIONS

3.3.4 The Permittee shall comply with all applicable provisions of 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart A - "General Provisions" and Subpart III – “Standards for Stationary Compression Ignition Internal Combustion Engines”, for the operation of generator (Emission Unit ID PSG9) at all times during the useful life of the engine. The Permittee shall comply with emission standards for non-methane hydrocarbons and NOx (NMHC + NOx), carbon monoxide (CO), and PM as listed in Table 1 of 40 CFR 89.112 during the useful life of the engine.
[40 CFR 60.4204(b) and 60.4206]

Table (1): NSPS 40 CFR 89.112 Emission Standards For Stationary 2007 Model Year and later Non Emergency Diesel Engines With A Displacement Of Less Than 10 Liters Per Cylinder

	g/kW-hr		
Pollutant →	NMHC + NOx	CO	PM
Emission Limit →	6.4	3.5	0.20

3.3.5 The Permittee must operate and maintain the generator (Emission Unit ID PSG9) and control device (APCD ID No. SCR9) according to the manufacturer’s written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer.
[40 CFR 60.4211(a)]

3.3.6 The Permittee must use diesel fuel that meets the following requirements:
[40 CFR 60.4207(a) and (b)]

- a. Beginning October 1, 2007, the Permittee shall only use diesel fuel in the generator (Emission ID PSG9) with the following per-gallon standards:
 - i. Sulfur content. 500 parts per million (ppm) maximum.
 - ii. Cetane index or aromatic content, as follows
 - (A). A minimum cetane index of 40; or
 - (B). A maximum aromatic content of 35 volume percent.
- b. Beginning October 1, 2010, the Permittee shall only use diesel fuel in the generator with (Emission ID PSG9) with the following per-gallon standards:
 - i. Sulfur content. 15 ppm maximum.
 - ii. Cetane index or aromatic content, as follows
 - (A). A minimum cetane index of 40; or
 - (B). A maximum aromatic content of 35 volume percent.

- 3.3.7 The Permittee shall not discharge into or cause the discharge into the atmosphere from emergency generator PSG9 any visible emissions the opacity of which is greater than 20% during accelerations or greater than 15 % during lugging or greater than 50% during breaks in either the acceleration or lugging modes.
[60.4201(a) and 391-3-1-.02(2)(b)(subsumed)]

3.4 Equipment SIP Rule Standards

MODIFIED CONDITIONS

- 3.4.2 Except as provided in Condition No. 3.3.6, the Permittee shall not fire any fuel in any source in Equipment Group EG00 or PSG0 that contains greater than 2.5 weight percent sulfur.
[391-3-1-.02(2)(g)2]
- 3.4.3 Except as provided in Condition No. 3.3.7, the Permittee shall not discharge or cause the discharge into the atmosphere from any source in Equipment Group EG00 or PSG0 any gases which exhibit opacity equal to or greater than 40 percent.
[391-3-1-.02(2)(b)]

NEW CONDITIONS

- 3.4.6 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from each non-emergency generator with Emission IDs PSG9 and PG10 in Equipment Group PSG0, any gases which contain nitrogen oxides (NOx) in excess of 80 parts per million (ppm) at 15% oxygen, dry basis, during the ozone season. For purposes of this permit, the ozone season is defined as the time period beginning May 1 and ending September 30.
[391-3-1-.02(2)(mmm)]
- 3.4.7 The Permittee shall operate the Selective Catalytic Reduction (SCR) system on generator with Emission ID PSG9 and Catalytic Converter on generator with Emission ID PG10 at all times.
[Avoidance of 391-3-1-.03(8)(c)]
- 3.4.8 The Permittee shall only fire distillate fuel oil in generator with Emission ID PSG9 and shall only fire natural gas or propane in generator with Emission ID PG10.
[Avoidance of 391-3-1-.03(8)(c), 391-3-1-.02(2)(g)2 subsumed]
- 3.4.9 The Permittee shall not cause, let, suffer, permit or allow the operation of the Generators with Emission IDs PSG9 and PG10 to exceed 700 hours per generator during any 12 consecutive months.
[Avoidance of 391-3-1-.03(8)(c)]

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division’s Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 are as follows:

- g. Method 7E shall be used for the determination of nitrogen oxides concentration when determining compliance with the limits in Conditions 3.4.5 and 3.4.6. The sampling time for each run shall be at least 60 minutes.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.

[391-3-1-.02(3)(a)]

4.2 Specific Testing Requirements

NEW CONDITIONS

4.2.11 Within 60 days after the initial startup of generator with Emission ID PSG9, the Permittee shall conduct a performance test for nitrogen oxides emissions to verify compliance with Condition No. 3.4.6.

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

4.2.12 Within 60 days after the initial startup of generator with Emission ID PG10, the Permittee shall conduct a performance test for nitrogen oxides emissions to verify compliance with Condition No. 3.4.6. In order for the engine to avoid these testing requirements and to avoid the applicable monitoring requirements noted in Condition 5.2.5, the Permittee shall submit written documentation to the Division (certification by a Responsible Official) at least thirty days prior to the date of any performance test required by this condition, indicating that the particular IC engine will only operate in accordance with Georgia Rule 391-3-1-.02(2)(mmm)4(i).

[391-3-1-.02(6)(b)1 and 391-3-1-.02(2)(mmm)4(i)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)**5.1 General Monitoring Requirements**

5.1.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.

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

5.2 Specific Monitoring Requirements**MODIFIED CONDITIONS**

5.2.4 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. 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 and 40 CFR 70.6(a)(3)(i)]

a. The cumulative total hours of operation, during all periods of operation, from generators in Equipment Group PSG0. Data shall be recorded monthly.

5.2.5 The Permittee shall, each Ozone season, beginning May 1, 2005, monitor emissions of Nitrogen oxides (NO_x) from each IC engine in Equipment Groups EG00 and PSG0 that cannot meet the definition of "Emergency standby stationary engine" found in Georgia Rule 391-3-1-.02(2)(mmm)4, using the following protocol:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. During May of each Ozone season, measurements of Nitrogen oxides and oxygen concentrations shall be conducted using the procedures of Gas Research Institute Method GRI-96/0008, EPA/EMC Conditional Test Method (CTM-30) *Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers*. The measurement period shall consist of one (1) test run thirty (30) minutes in duration.

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- b. Nitrogen oxides concentrations shall be corrected to 15 percent oxygen using the following equation:

$$C_{adj} = C_d * [5.9/(20.9-\%O_2)]$$

Where:

C_{adj} = Nitrogen oxides concentration corrected to 15 percent oxygen, ppm.

C_d = Nitrogen oxides concentration measured, dry basis, ppm.

$\%O_2$ = Measured oxygen concentration, dry basis, percent.

- c. A record of nitrogen oxides monitoring shall be kept in a form suitable for inspection or submittal for a period of five (5) years. The records shall at a minimum contain the cause and corrective action for all excursion, the date of each measurement, concentration of nitrogen oxides (corrected to 15 percent oxygen), and the concentration of oxygen.
- d. For emergency standby generator engines, submit written documentation to the Division (certification by a Responsible Official) that the particular IC engine will only operate in accordance with Georgia Rule 391-3-1-.02(2)(mmm)4(i) during the ozone season to avoid the applicable monitoring requirements noted in Condition 5.2.5. Such documentation must be received by the Division within 60 days of permit issuance.

- 5.2.6 The diesel particulate filter must be installed with a backpressure monitor that notifies the Permittee with the high backpressure limit of the engine is approached.
[40 CFR 60.4209(b)]

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

i. None required to be reported in accordance with Condition 6.1.4.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

[No changes to this section.]

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

v. Each measurement (by CTM-30) of Nitrogen Oxides from non-emergency generators with Emission IDs PSG9 and PG10 in Equipment Group PSG0, that exceeds 80 parts per million, corrected to 15 percent oxygen.

d. In addition to the excess emissions, exceedances and excursions specified above, the following should also be included with the report required in Condition 6.1.4:

i. The Permittee shall submit a written report of the record of hours of operation of the generators in Equipment Group PSG0, as required in Conditions 5.2.4.

6.2 Specific Record Keeping and Reporting Requirements

MODIFIED CONDITION

Recordkeeping for Fuel Consumption Limits

6.2.5 The Permittee shall retain the following monthly records:

- a. The quantity (in million cubic feet) of natural gas consumed by each boiler with emission unit ID Nos. SB04, SB05, and SB06.
- b. The quantity (in gallons) of Jet A fuel consumed by each boiler with emission unit ID Nos. SB04, SB05, and SB06.
- c. The quantity (in million cubic feet) of natural gas consumed in non-emergency generator PG10.
- d. The quantity (in gallons) of propane consumed in non-emergency generator PG10.

These records shall be maintained in a format suitable and available for inspection and submittal.

[PSD Avoidance; NAA/NSR Avoidance, and Alternative Monitoring of Fuel Consumption under NSPS Subpart Dc, approved by US EPA Region 4 on August 14, 1996]

NEW CONDITION

6.2.21 The Permittee shall demonstrate compliance with the applicable emission limits in Condition 3.3.4 for generator PSG9 according to one of the following methods:

[60.4211(b)]

- a. Purchasing engine certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's specifications;
- b. Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test shall have been conducted using the same methods specified in 40 CFR Part 60, Subpart IIII and those methods shall have been followed correctly; or
- c. Keeping records of engine manufacturer data indicating compliance with the standards.

6.2.22 The Permittee shall keep records for the backpressure monitor required in Condition 5.2.6 for generator with Emission ID PSG9, of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached.

[40 CFR 60.4214(c)]

Attachments

- A. List of Standard Abbreviations and List of Permit Specific Abbreviations

