GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

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NARRATIVE

TO: Cynthia Dorrough

FROM: Renee C Browne

DATE: September 12, 2023

Facility Name:	**Hartsfield-Jackson Atlanta International Airport Resiliency Facility**
AIRS No.:	063-00150
Location:	Atlanta, GA (Clayton County)
Application #:	28964
Date of Application:	July 27, 2023

Background Information

Hartsfield- Jackson Atlanta International Airport (HJAIA) Resiliency Facility is located on 6000 North Terminal Parkway, Atlanta, Georgia 30320 (Clayton County). The facility provides support to existing electric service for the airport concourses and terminals. Georgia Power operates 100, 625kW Tier 4 certified ultra-low sulfur diesel engine generators with selective catalytic reduction (SCR) systems at locations throughout the airport.

The engines are located on property contiguous and adjacent to the airport, and belong to the same industrial grouping, no common control exists as Georgia Power has the sole and exclusive authority to dictate the use and manner of operation of the engines, including the engines' air pollution controls. In effect, Georgia Power will be providing the airport with the same service as it currently does, except that electricity will be generated onsite when not available from the electric system. Therefore, the HJAIA Resiliency Facility is classified as a separate stationary source for the purposes of permitting exercises.

The HJAIA Resiliency Facility is in Clayton County which was a nonattainment area for the 2015 8-hour Ozone standard. A major source includes any stationary source or groups of sources located within a contiguous area and under common control that has potential emissions of 100 tons per year or greater for NOx or VOC. The facility will be classified as a synthetic minor source because potential emissions of NOx, the major pollutant, exceeds 100 tpy, however the facility has elected to limit NOx emissions to less than 100 tons per year.

Purpose of Application

Application No. 28694 was received by the Division on August 2, 2023, to modify the limit expressed in Permit No. 4911-063-0150-S-01-0, Condition No. 2.1 from the current 308,829 hours to 50,000 hours of operation for all engines, combined, during any twelve consecutive months as a result of a modeling protocol request related to Delta Air Line's expansion of Test Cell No. 5 (Application No. 622776, submitted June 6, 2023). The effect of the proposed modification is a reduction in potential emissions from the existing synthetic minor source which will allow dispersion modeling results from Delta

Airline's expansion of Test Cell No. 5 to demonstrate no adverse impact on air quality and emissions of NO_2 do not exceed the 1-hour NO_2 NAAQS standard.

However, after some discussion between the facility and the Division, the limit proposed is 500 hours per engine per twelve consecutive months due to constraints in air dispersion modeling for intermittent sources such as generators. The potential emissions for this proposal were based on each engine running at 500 hours per twelve consecutive months as a worst-case scenario.

Emissions Summary

NOx emissions will be limited to less than 100 tons per year by limiting the hours of operation of each generator to 500 hours per twelve consecutive months. Potential annual fuel consumption of all engines is a total of 1,866 Mgal/yr. Fuel sulfur content is limited by 40 CFR 60.4207(b) of NSPS IIII. Emission factors are based on Not-to-Exceed values calculated using 40 CFR 1039.101(e) and the Manufacturer's Exhaust Emission Declaration as available or AP-42 Section 3.4 (Large Stationary Diesel And All Stationary Dual-fuel Engines), Table 3.4-1 (10/96). Potential emissions are based on the kwh and hp of the engines and the Not-to-Exceed and AP 42 values. Actual emissions are based on 200 hours of operation per engines and the Not-to-Exceed and AP 42 values.

Facility-Wide Emissions
(in tons per year)

Pollutant	Potential Emissions			Actual Emissions		
	Before Mod.	After Mod.	Emissions Change	Before Mod.	After Mod.	Emissions Change
PM	5.74	0.93	-4.81	0.37	0.37	-
$PM_{10}/PM_{2.5}$	11.89	1.93	-9.96	0.77	0.77	-
NOx	<100	16.19	<100	6.48	6.48	-
SO_2	1.57	0.25	-1.32	0.1	0.1	-
CO	23.40	3.79	-19.61	1.52	1.52	-
VOC	1.06	0.17	-0.89	0.07	0.07	-
Max. Individual HAP	0.62	0.10	-0.52	0.04	0.04	-
Total HAP	1.26	0.20	-1.06	0.08	0.08	-

1. PM, CO, VOC, NOx emissions factors are based on Not-to-exceed manufacturer limit.

Manufacture Emission Limits		Not-to-exceed Manufacture Limits*
	g/kw-hr	g/kw-hr
NOx =	0.31	0.47
NMHC =	0.003	0.005
CO =	0.09	0.11
Filterable PM =	0.018	0.027

* Not-to-Exceed (NTE) value based on 40 CFR 1039.101(e). The NET multiplier for each pollutant is 1.25 for CO and 1.5 for NOx, NMHC and PM.

2. Sulfur content (15 ppmv) in accordance with 40 CFR 60.4207(b) as required by NSPS Subpart IIII.

3. Otherwise emission factors from AP-42 Section 3.4 (Large Stationary Diesel And All Stationary Dual-fuel Engines), Table 3.4-1 (10/96). Emission factors in lb/MMBtu were converted to lb/hp-hr by multiplying the power conversion factor of 6,167 Btu/hp-hr and 1 MMBtu/1,000,000 Btu.

4. All PM is assumed to have a diameter of less than one micron. Additionally, there is no CPM factor available; thus, PM = PM_{10} = $PM_{2.5}$.
6. Annual emissions are calculated as follows:
Annual Emissions (tpy) = Hourly Emissions (lb/hr) * Annual Operation (hr/yr) / 2,000 (lb/ton).

Regulatory Applicability

No new regulations have been added with this permit amendment.

Permit Conditions

Permit Condition 2.1 was modified to remove the limit of 308,829 hours of operation for all engines, combined, during any twelve consecutive months per the Division's request related to Delta Air Line's expansion of Test Cell No. 5 (Application No. 622776, submitted June 6, 2023.) and replace it with the limit of 500 hours per twelve consecutive month per engine.

Permit Condition 7.3 contains the notification of the operational hour limit exceedance which was modified per Permit Condition 2.1 to 500 hours per twelve consecutive month per engine.

Toxic Impact Assessment

No toxic impact assessment was required for this modification.

Summary & Recommendations

In conclusion, I recommend issuing Permit Amendment No. 4911-03-0150-S-02-2 to Georgia Power for the HJAIA Resiliency Facility. No public advisory was issued because there was no increase in emissions associated with this modification.

Addendum to Narrative

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

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