PERMIT AMENDMENT NO. 7374-217-0072-S-01-4
ISSUANCE DATE: 03/04/2022

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. 7374-217-0072-S-01-4 issued on December 14, 2017 to:

Facility Name:	**Morning Hornet, LLC**
Facility Address:	**South of Highway 278 NE and Shire Parkway and North of Cooper Road, Social Circle, Georgia 30025 Newton, Morgan, and Walton Counties**
Mailing Address:	**1 Hacker Way** **Menlo Park, CA 94025**
Facility AIRS Number:	**04-13-217-00072**

for the following: Construction and operation of a data center with emergency standby stationary generators.

is hereby amended as follows: The addition of thirty-six [36] Group 4 Generators and one [1] Fire Pump Engine.

Reason for Amendment: Application No. 28220 dated December 3, 2021 and received December 10, 2021.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **5** page(s).

This Permit Amendment is hereby made a part of Permit No. 7374-217-0072-S-01-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.

Richard E. Dunn, Director
Environmental Protection Division

2. Allowable Emissions

Modified Conditions

2.3 The Permittee shall operate the emergency generators **and fire pump** according to the requirements specified below. Any operation other than emergency operation, maintenance check and readiness testing, as described below, is prohibited:

a. The Permittee may operate the emergency generators **and fire pump** of the purposes specified in paragraph i. below for a maximum of 100 hours per calendar year.
[40 CFR 60.4211(f)(2)]

i. The emergency generators **and fire pump** may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Division for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency generators beyond 100 hours per calendar year.

2.4 The Permittee shall not cause, let, suffer, permit or allow emissions from the emergency generators **and fire pump** the opacity of which is equal to or greater than forty (40) percent opacity (6-minute average).
[391-3-1-.02(2)(b)1]

2.5 The Permittee shall comply with all applicable provisions of 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart A - "General Provisions" and Subpart IIII – "Standards for Stationary Compression Ignition Internal Combustion Engines", for the operation of generators **and fire pump**.
[40 CFR 60, Subparts A and IIII]

2.7 The Permittee shall comply with the 40 CFR 63, Subpart A "General Provisions" and 40 CFR 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [RICE]" for operation of the emergency generators **and fire pump** by complying with 40 CFR 60 Subpart IIII – "Standards for Stationary Compression Ignition Internal Combustion Engines".
[40 CFR 63, Subparts A and ZZZZ]

4. Process & Control Equipment

Modified Condition

4.1 Each of the emergency generators **and fire pump** shall be operated and maintained according to the manufacturer's emission-related written specifications/instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. In addition, the Permittee shall only change those emission-related settings that are permitted by the manufacturer.
[40 CFR 60.4211(a)]

New Condition

4.2 Routine maintenance shall be performed on all air pollution control equipment. Maintenance records shall be recorded in a permanent form suitable and available for inspection by the Division. The records shall be retained for at least five years following the date of such maintenance.

5. Monitoring

Modified Conditions

5.2 The Permittee shall install, calibrate, maintain, and operate a system to monitor and record the indicated parameters on each emergency generator **and fire pump**. 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; 40 CFR 63.6625(f); 40 CFR 60.4209(a)]

a. 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).

b. A system to record the reason the engine was in operation during emergency and/or non-emergency service, and to record the cumulative total hours of operation.

c. A system to monitor the generator output load (in kilowatts electric, KWe) from each emergency generator **and fire pump**. The maximum generator output shall be recorded each time the generator is operated.

New Condition

5.3 **The Permittee shall install, calibrate, operate, and maintain SCR devices on all Group 4 generators to control NOx emissions to meet the emission factors in Condition 7.6 Table Group 4. The Permittee shall install, calibrate, operate, and maintain the SCR devices on each Group 4 generator according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. These units shall be equipped with alarms to indicate potential malfunctions of the SCRs.**

7. Notification, Reporting and Record Keeping Requirements

Modified Conditions

7.1 The Permittee shall maintain monthly operating records for each emergency generator **and fire pump** in emergency and non-emergency service, as recorded on the non-resettable hour meter required for each generator **and fire pump** in Condition 5.2. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. Records shall be maintained for a period of five (5) years in a format suitable for inspection by or submission to the Division.
[391-3-1-.02(6)(b)1]

7.2 The Permittee shall use monthly operating time data required by Condition 7.1 to calculate monthly the twelve-month rolling total of operating time for each of the generators **and fire pump** specified in Condition 7.1 for each consecutive twelve-month period. All the calculations shall be kept as part of the records required in Condition 7.1. The Permittee shall notify the Division in writing within 15 days if the twelve-month rolling total operating time for any **emergency** generator **other than the fire pump** equals or exceeds 200 hours. This notification shall include an explanation of how the Permittee intends to comply with Condition 2.2.
[391-3-1-.02(6)(b)1]

7.3 The Permittee shall use monthly non-emergency service operating time records required by Condition 7.1 to calculate monthly the twelve-month rolling total of the non-emergency service operating time for the generators **and fire pump** for each consecutive twelve-month period. All the calculations shall be kept as part of the records required in Condition 7.1. The Permittee shall notify the Division in writing within 15 days if the twelve-month rolling total of non-emergency service operating time for any generator **or fire pump** equals or exceeds 100 hours. This notification shall include an explanation of how the Permittee intends to comply with Condition 2.2.
[40 CFR 60.4211(f)(3)]

7.4 The Permittee shall demonstrate compliance with emission standards specified in 40 CFR 60, Subpart IIII for **the** emergency generators **and fire pump** by purchasing an engine certified to the emission standards in 40 CFR60.4205(b) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications. These records shall be maintained in a format suitable for inspection or submittal.
[40 CFR 60.4211(c)]

7.5 The Permittee shall keep records verifying that each shipment of diesel fuel oil received for firing the generators **and fire pump** at the facility complies with the applicable requirements in Condition 2.6. Verification shall consist of the fuel oil receipts and/or fuel supplier certifications, or results of analyses of the fuel oils conducted by methods of sampling and analysis, which have been specified or approved, by the EPA or the Division. These records shall be kept available for inspection or submittal for five (5) years from the date of record.
[391-3-1-.02(6)(b)1]

7.6 The Permittee shall use the operational data (hours and load) measured and recorded per Conditions 5.2 and 7.1 and calculate monthly NOx emissions, each calendar month, from all emergency generators (Group 1, Group 2, Group 3, **and Group 4) and fire pump**. All demonstration calculations shall be kept as part of the records required by Condition 7.1. Monthly NOx emissions from fuel combustion at the facility shall be determined using the following equation:

$$
\begin{aligned}
&Total\ Monthly\ NO_X\ Emission\left(\frac{tons}{months}\right) \\
&= \sum_{i=0\%}^{100\%}\Big[Group\ 1\ Generator\ NO_X\ Emission\ Rate\ at\ Load_i\left(\frac{lb}{hr}\right) \\
&\qquad \times\ Monthly\ Hours\ of\ Operation\ for\ all\ Group\ 1\ Generators\ at\ Load_i\left(\frac{hrs}{month}\right)\Big] \div \left(2{,}000\ \frac{lb}{ton}\right) \\
&+ \sum_{i=0\%}^{100\%}\Big[Group\ 2\ Generator\ NO_X\ Emission\ Rate\ at\ Load_i\left(\frac{lbs}{hr}\right) \\
&\qquad \times\ Monthly\ Hours\ of\ Operation\ for\ all\ Group\ 2\ Generators\ at\ Load_i\left(\frac{hrs}{month}\right)\Big] \div \left(2{,}000\ \frac{lbs}{ton}\right) \\
&+ \sum_{i=0\%}^{100\%}\Big[Group\ 3\ Generator\ NO_X\ Emission\ Rate\ at\ Load_i\left(\frac{lbs}{hr}\right) \\
&\qquad \times\ Monthly\ Hours\ of\ Operation\ for\ all\ Group\ 3\ Generators\ at\ Load_i\left(\frac{hrs}{month}\right)\Big] \div \left(2{,}000\ \frac{lbs}{ton}\right) \\
&+ \sum_{i=0\%}^{100\%}\Big[\boldsymbol{Group\ 4\ Generator\ NO_X\ Emission\ Rate\ at\ Load_i\left(\frac{lbs}{hr}\right)} \\
&\qquad \times\ \boldsymbol{Monthly\ Hours\ of\ Operation\ for\ all\ Group\ 4\ Generators\ at\ Load_i\left(\frac{hrs}{month}\right)}\Big] \\
&\qquad \div \left(\boldsymbol{2{,}000\ \frac{lbs}{ton}}\right) \\
&+ \sum_{i=0\%}^{100\%}\Big[\boldsymbol{Fire\ Pump\ NO_X\ Emission\ Rate\ \left(\frac{lbs}{hr}\right) \times\ Monthly\ Hours\ of\ Operation\ for\ Fire\ Pump\ \left(\frac{hrs}{month}\right)}\Big] \\
&\qquad \div \left(\boldsymbol{2{,}000\ \frac{lbs}{ton}}\right)
\end{aligned}
$$

Where:

$i = the\ engine\ load\ during\ the\ run\ (10\%, 25\%, 50\%, 75\%, and\ 100\%)$

Emission Rate at Load = the NOx mass emission rate in pounds per hour for $Load_i$. For runs where the maximum recorded load is at 10%, 25%, 50%, 75% or 100% load, the *Emission Rate at Load$_i$* will be equal to the corresponding emission rate in the table below or will be based on more up-to-date specifications provided by the corresponding generator manufacturer. For runs where the maximum recorded load is at other loads, the *Emission Rate at Load$_i$* will be equal to the emission rate listed in the table below that corresponds to the next highest load.

Hours at Load = total facility wide operating hours at a given calculated load for the given calendar month.

Hourly Emission Rate @ Load for engines (Group 1) with power input of 28.4 MMBtu/hr:

Group 1					
Average Load	10%	25%	50%	75%	100%
Emission Rate (lbs/hr)	11.93	14.03	26.93	47.91	70.72

Hourly Emission Rate @ Load for engines (Group 2) with power input of 10.0 MMBtu/hr:

Group 2					
Average Load	10%	25%	50%	75%	100%
Emission Rate (lbs/hr)	6.20	6.20	10.89	15.43	30.42

Hourly Emission Rate @ Load for engines (Group 3) with power input of 28.4 MMBtu/hr:

Group 3					
Average Load	10%	25%	50%	75%	100%
Emission Rate (lbs/hr)	11.93	14.03	26.93	47.91	70.72

Hourly Emission Rate @ Load for engines (Group 4) with power input of 28.4 MMBtu/hr:

Group 4					
Average Load	**10%**	**25%**	**50%**	**75%**	**100%**
Emission Rate (lbs/hr)	**7.75**	**5.61**	**4.04**	**7.19**	**7.07**

Hourly Flow Rate @ Load for Fire Pump with power input of 1.2 MMBtu/hr:

Fire Pump					
Average Load	**10%**	**25%**	**50%**	**75%**	**100%**
Emission Rate (lbs/hr)			**0.74**		

New Condition

7.8 The Permittee shall maintain records of each fault condition and each alarm condition on each Group 4 Generator and accompanying SCR. The records shall indicate the date and time of the fault or alarm, cause of the fault or alarm, and corrective action taken to repair the fault or alarm.
[391-3-1-.02(6)(b)1]