PERMIT AMENDMENT NO. 7375-097-0091-S-01-1
ISSUANCE DATE: 6/28/2019

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. 7375-097-0091-S-01-1 issued on February 9, 2018 to:

Facility Name:	**The Keep Campus**
Facility Address:	**580 Douglas Hills Road** **Lithia Springs, Georgia 30168 Douglas County**
Mailing Address:	**P.O. Box 400850** **Las Vegas, NV 89140**
Facility AIRS Number:	**04-13-097-00091**

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

is hereby amended as follows: construction and operation of a Corporate Diesel-Fired Emergency Generator (Source Code: CGEN) to provide back-up power to the corporate offices at The Keep Campus.

Reason for Amendment: Application No. 27036 signed April 17, 2019.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **3** page(s).

This Permit Amendment is hereby made a part of Permit No. 7375-097-0091-S-01-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
1776

[Signed]

Richard E. Dunn, Director
Environmental Protection Division

Modified Conditions

6.2 Within 180 days after the startup of any emergency generator, the Permittee shall conduct load tests on two (where applicable) of the emergency generator engines to measure for Nitrogen Oxides (NOx) to determine the emission rate (in lb/hr and grams per bHp-hr) of these engines as pertaining to the applicable emission limits specified in Condition 7.6. The results of the load tests(s), including process, monitoring data, and all supporting calculations, shall be submitted to the Division within 60 days of the completion of the testing.
[391-3-1-.02(3), 391-3-1-.03(2)(c)]

Each test measurement shall use the following procedures:

a. The Permittee shall carry out a measurement for Nitrogen Oxides. A minimum of four measurements shall be made for each engine: one representing 10% load (+/- 5%), 25% load (+/- 5%), one representing 50% load (+/- 5%), one representing 75% load (+/- 5%), and one representing 100% load (+/- 5%). Each measurement shall last a minimum of 30 minutes. The procedures in Condition 6.3 of the permit shall be used to conduct the measurements.

b. The percent load will be based on the engine-generator-set's rated maximum standby power rating.

c. Should any of the steady state NOx emission rates determined at a given load point for the two (where applicable) engines vary from each other by more than 10%, the Division may ask the Permittee to test more engines to better represent the engines population's worst case emissions.

d. Should any of the steady state NOx emission rates determined at a given load point for the two (where applicable) engines exceed the Manufacture's Emission Rate, the higher tested emission rate at the represented load shall be used to calculate NOx emissions according to Condition 7.6.

7.6 The Permittee shall use the operational data (hours and load, if needed) measured and recorded per Conditions 5.2 and 7.1 and Division approved emission rates to calculate monthly NOx emissions, each calendar month, from all emergency generators and the Corporate Diesel-Fired Emergency Generator (Source Code: CGEN). The Permittee shall use the higher of the Manufacture's Emission Rates in the table below or the NOx emission rates determined from the performance testing required by Condition 6.2. All demonstration calculations shall be kept as part of the records required by Condition 7.1. The Permittee shall notify the Division in writing within 15 days if the monthly total NOx emissions from the facility equals or exceeds 2.08 tons during any calendar month. This notification shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition 2.1. Monthly NOx emissions from fuel combustion at the facility shall be determined using the following equation:

a. Monthly NOx Emissions:

$$NOx\ (tons) = \sum_{n=1}^{x} \left[Emission\ Rate\ @\ 100\%\ Load\ L_{\mathrm{n}} \left(\frac{lbs}{hr}\right)\right] [Hrs_{\mathrm{n}}]/2000$$

Where:

Emission Rate @ 100% Load L_n = The mass emission rate in pounds per hour for engine *n* at 100% operating load (The higher of the Manufacture's Emission Rate 51.76 lbs/hr or the NOx emission rate determined from performance testing required by Condition 6.2 for the emergency generators except the Corporate Diesel-Fired Emergency Generator (Source Code: CGEN), and the higher of the Manufacture's Emission Rate 9.05 lbs/hr or the NOx emission rate determined from performance testing required by Condition 6.2 for the Corporate Diesel-Fired Emergency Generator (Source Code: CGEN)).

Hrs = the total operating hours for engine *n* in the given calendar month.

n = generator number

x = actual number of generators in operation

or as an alternative:

b. 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 and the Corporate Diesel-Fired Emergency Generator (Source Code: CGEN). 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:

Total Monthly NOx Emissions (tons/month):

$$= \sum_{i=0\%}^{100\%} \left[Emission\ Rate\ at\ Load_i \left(\frac{lb}{hr}\right) X\ Hours\ at\ Load_i \left(\frac{hrs}{month}\right)\right] \div \left(2{,}000\,\frac{lb}{ton}\right)$$

Where:

i = the next highest engine load from the average load over one-hour measured 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 hours where the average recorded load is at 10%, 25%, 50%, 75% or 100% load, the *Emission Rate at Load$_i$* will be equal to the higher of the corresponding emission rate in the table below or the emission rate determined from performance testing. For runs where the maximum recorded load is at other loads, the *Emission Rate at Load$_i$* will be equal to the higher of the emission rate listed in the table below or the emission rate determined from performance testing 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.

Emission Rate @ Load for all emergency generators except the Corporate Diesel-Fired Emergency Generator (Source Code: CGEN)

Average Load	10%	25%	50%	75%	100%
Manufacture's Emission Rate (lbs/hr)	4.65	7.29	14.93	26.87	51.76

Emission Rate @ Load for the Corporate Diesel-Fired Emergency Generator (Source Code: CGEN)

Average Load	10%	25%	50%	75%	100%
Manufacture's Emission Rate (lbs/hr)	1.3	1.96	3.45	5.98	9.05