PERMIT NO. 7376-135-0235-S-08-0
ISSUANCE DATE:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality Permit

In accordance with the provisions of 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 and in effect under that Act,

Facility Name:	**Quality Investment Properties Suwanee, LLC**
Facility Address:	**300 Satellite Blvd. NW & 120 Satellite Blvd. NW Suwanee, Georgia 30024, Gwinnett County**
Mailing Address:	**300 Satellite Blvd. NW Suwanee, Georgia 30024**
Facility AIRS Number:	**04-13-135-00235**

is issued a Permit for the following:

Operation of two data centers (DC1 and DC2) containing forty-five (45) existing emergency generators, and the construction and operation of five (5) additional emergency generators rated at 2,500 kW each. 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.

This Permit 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.

This Permit 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. 28926 dated June 20, 2023; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

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

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

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Jeffrey W. Cown, Director
Environmental Protection Division

1. General Requirements

1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.

1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.

1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.

1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.

1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

2. Allowable Emissions

2.1 The Permittee shall not discharge or cause the discharge into the atmosphere from the combination of all emergency generators nitrogen oxides (NO_x) emissions equal to or greater than 100 tons during any consecutive twelve-month period.
[Avoidance of 40 CFR Part 70]

2.2 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 emergency generators with source codes GN13 through GN50.
[40 CFR 60, Subparts A and IIII]

2.3 The Permittee shall comply with all applicable provision of 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 emergency generators with source codes GN13 through GN50 by complying with 40 CFR 60 Subpart IIII.
[40 CFR 63, Subparts A and ZZZZ]

2.4 The Permittee shall limit the operation of all emergency generators to the following criteria:
[391-3-1-.02(2)(mmm)8; 40 CFR 60.4211(f) subsumed]

a. Operate only for routine testing and maintenance, when electric power from the local utility is not available, or during internal system failures;

b. Total annual operation for each generator is less than 500 hours per year;

c. Operation for routine testing and maintenance during the months of May through September occurs only between 10 p.m. and 4 a.m. Operation for routine testing and maintenance during the months of January through April and October through December may be done during any time of day; and

d. The facility maintains records of all operation, including the reason for the operation.

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

2.6 Any fuel fired in the emergency generators with source codes GN01 through GN12 shall not contain more than 0.5% sulfur, by weight.
[391-3-1-.03(2)(c) and 391-3-1-.02(2)(g)]

2.7 The Permittee shall only use diesel fuel that has a maximum sulfur content of 15 ppm (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent for the emergency generators with source codes GN13 through GN50.
[40 CFR 60.4207 and 391-3-1-.02(2)(g) subsumed]

2.8 The Permittee shall operate all emergency generators 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 for the purpose specified in paragraph i. below for a maximum of 100 hours per calendar year.
[40 CFR 60.4211(f)(2)]

i. The emergency generators 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.

3. Fugitive Emissions

3.1 The Permittee shall take all reasonable precautions with any operation, process, handling, transportation, or storage facilities to prevent fugitive emissions of air contaminants.

4. Process & Control Equipment

4.1 Each emergency generator with source codes GN13 through GN50 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)]

5. Monitoring

5.1 Any continuous monitoring system or device required by the Division and installed by the Permittee shall be in continuous operation except during calibration checks, zero and span adjustments or periods of repair. 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 The Permittee shall install, calibrate, maintain, and operate a system to monitor and record the indicated parameters on each emergency generator. 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. Data shall be recorded at least each hour the generator is operated. The generator output data shall be used to determine the average monthly measured operating load from each emergency generator.

6. Performance Testing

6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

a. All 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.

b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.

c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.

d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.

6.2 If requested by the Division, the Permittee shall perform a measurement on one generator engine in each emission unit group in Table 1 of Condition 7.4. The measurement shall be at 25%, 50%, 75%, and 100% load to verify the Nitrogen Oxides emission factors in Table 1.

Each test measurements shall use the following procedures:

a. The owner and/or operator shall carry out a measurement for Nitrogen Oxides and Oxygen for a minimum of 30 minutes in length. A minimum of four measurements shall be made for each engine: one representing 25% load, one representing 50% load, one representing 75% load and one representing 100% load.

b. All measurements of Nitrogen Oxides 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 NOx, 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 NOx, 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. Concurrent measurements for flow and moisture shall be made using the procedures of EPA Reference Methods 2 and 4, respectively during the Nitrogen Oxides and Oxygen measurements.

c. The owner and/or operator 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 Nitrogen Oxides and Oxygen values determined during the measurements, as well as the flow data measurements.

6.3 Within 90 days of the startup of the first emergency generators with source codes GN46 through GN50, the Permittee shall perform a measurement on one of the generator engines at 25%, 50%, 75%, and 100% load to verify the Nitrogen Oxides emission factors in Table 1 of Condition 7.4. The test measurement shall use the procedures specified in Condition 6.2. For the purposes of this condition, startup shall be defined as the emergency generator is ready to operate for its intended purpose to support the activities of the facility following all construction and commissioning activities.

6.4 Within 90 days of the date of issuance of this permit, the Permittee shall perform a measurement on one of the generator engines in Group 7 at 25%, 50%, 75%, and 100% load and the one generator engine in Group 8 at 100% load to verify the Nitrogen Oxides emission factors in Table 1 of Condition 7.4. The test measurement shall use the procedures specified in Condition 6.2.

7. Notification, Reporting and Record Keeping Requirements

7.1 The Permittee shall maintain monthly operating records for each emergency generator in emergency and non-emergency service, as recorded on the non-resettable hour meter required for each generator 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 emergency generators 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 generator equals or exceeds 500 hours. This notification shall include an explanation of how the Permittee intends to comply with Condition 2.4.
[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 each of the emergency generators 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 emergency generator equals or exceeds 100 hours. This notification shall include an explanation of how the Permittee intends to comply with Condition 2.8.
[40 CFR 60.4211(f)(3)]

7.4 The Permittee shall use the operating time records required in Condition 7.1 for the emergency generators and the emission factors in Table 1 (or other emission factors which have been submitted to and approved by the Division) to calculate the monthly total NOx emissions using the following equation. All demonstration 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 monthly total NOx emissions equal or exceed 8.33 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.
[Avoidance of 40 CFR Part 70]

Table 1: NOx Emission Factors

Emission Unit Groups	NOx Emission Factor (lb/hr)			
	25% Load	50% Load	75% Load	100% Load
DC1				
GN01-GN06 (Group1) – Hitec 1,440 kW	17.90	32.37	45.40	61.01
GN07-GN12 (Group 2) – Cat 2,000 kW	18.21	33.68	42.45	53.36
GN13-GN18 (Group 3) – Cat 2,250 kW	10.07	21.21	38.37	57.46
GN19-GN24 (Group 4) – Kohler 2,800 kW	10.95	21.23	37.01	52.65
GN25-GN26 (Group 5) – Cummins 1,500 kW	5.12	9.62	16.08	29.47
GN27-GN29 (Group 6) – Kohler 2,500 kW	8.78	16.96	23.66	66.67
DC2				
GN30-GN44 (Group 7) – Cummins 2,000 kW	4.63	10.57	23.67	34.14
GN45 (Group 8) – Detroit Diesel 750 kW	N/A	N/A	N/A	14.44
GN46-GN50 (Group 9) – Cat 2,500	7.94	15.58	31.34	51.11

$$NO_{x,monthly}(tons) = \frac{\sum_{i=1}^{n}\left(ER_L + (ER_H - ER_L) \times \left(\frac{L - L_L}{L_H - L_L}\right)\left(\frac{lb}{hr}\right)\right) \times (Hr_i)}{2{,}000\,\frac{lb}{ton}}$$

Where:

$NO_{x,\ monthly}$ = Total monthly NOx emissions from all emergency generators. (tons)

L = Average monthly measured generator load for each emergency generator based on actual monthly emergency generator operating hours. If the actual load is less than the minimum load in Table 1, then use the minimum load from Table 1. (%)

L_L = Lower operating load. The closest operating load from Table 1 that is less than or equal to L. (%)

L_H = Higher operating load. The closest operating load from Table 1 that is greater than or equal to L. (%)

ER_L = Lower emission rate. The emission factor from Table 1 at the lower operating load (L_L). (lb/hr)

ER_H = Higher emission rate. The emission factor from Table 1 at the higher operating load (L_H). (lb/hr)

Hr = The total operating hours for each engine in the month as verified by the non-resettable hour meter.

i = Generator number (GN01 through GN50).

n = Total number of emergency generators = 50

7.5 The Permittee shall use the monthly records required in Condition 7.4 to calculate the twelve-month rolling total of NOx emissions from the emergency generators for each calendar month. 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 any of the twelve-month rolling totals of the NOx emissions equals or exceeds 50 tons.
[Avoidance of 40 CFR Part 70]

7.6 The Permittee shall demonstrate compliance with emission standards specified in 40 CFR 60, Subpart IIII for emergency generators with source codes GN13 through GN50 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)]

7.7 The Permittee shall keep records verifying that each shipment of diesel fuel oil received for firing the emergency generators at the facility complies with the applicable requirements in Conditions 2.6 and 2.7. 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]

7.8 The Permittee shall maintain a copy of the manufacturer's written operating and maintenance instructions or operating and maintenance procedures developed by the Permittee that are approved by the engine manufacturer for the emergency generators with source codes GN13 through GN50. These records shall be maintained in a format suitable for inspection or submittal.
[40 CFR 60.4211(a)]

8. Special Conditions

8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.

8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Application & Annual Permit Fees."

8.3 The following Air Quality Permits and Amendments are hereby revoked.

Air Quality Permit and Amendment Number(s)	Dates of Original Permit or Amendment Issuance
7376-135-0235-S-07-0	December 27, 2018
7376-135-0235-S-07-1	May 12, 2021
7376-135-0235-S-07-2	December 2, 2021
7376-135-0235-S-07-3	August 17, 2022
7374-135-0263-S-02-0	August 5, 2011
7374-135-0263-S-02-1	December 10, 2013
7374-135-0263-S-02-2	August 27, 2015
7374-135-0263-S-02-3	August 3, 2017

ATTACHMENT A

Source Code	Engine Group	Description
Data Center DC1		
GN01	Group 1	Mitsubishi Hitec S16R-PTA; 1440 kWe (2279 hp)
GN02	Group 1	Mitsubishi Hitec S16R-PTA; 1440 kWe (2279 hp)
GN03	Group 1	Mitsubishi Hitec S16R-PTA; 1440 kWe (2279 hp)
GN04	Group 1	Mitsubishi Hitec S16R-PTA; 1440 kWe (2279 hp)
GN05	Group 1	Mitsubishi Hitec S16R-PTA; 1440 kWe (2279 hp)
GN06	Group 1	Mitsubishi Hitec S16R-PTA; 1440 kWe (2279 hp)
GN07	Group 2	Catepillar Cat 3516BDITA; 2000 kWe (2836 hp)
GN08	Group 2	Catepillar Cat 3516BDITA; 2000 kWe (2836 hp)
GN09	Group 2	Catepillar Cat 3516BDITA; 2000 kWe (2836 hp)
GN10	Group 2	Catepillar Cat 3516BDITA; 2000 kWe (2836 hp)
GN11	Group 2	Catepillar Cat 3516BDITA; 2000 kWe (2836 hp)
GN12	Group 2	Catepillar Cat 3516BDITA; 2000 kWe (2836 hp)
GN13	Group 3	Catepillar AP Cat 3516BDITA; 2250 kWe (3196 hp)
GN14	Group 3	Catepillar AP Cat 3516BDITA; 2250 kWe (3196 hp)
GN15	Group 3	Catepillar AP Cat 3516BDITA; 2250 kWe (3196 hp)
GN16	Group 3	Catepillar AP Cat 3516BDITA; 2250 kWe (3196 hp)
GN17	Group 3	Catepillar AP Cat 3516BDITA; 2250 kWe (3196 hp)
GN18	Group 3	Catepillar AP Cat 3516BDITA; 2250 kWe (3196 hp)
GN19	Group 4	Kohler 2800 REOZD; 2800 kWe (4035 hp)
GN20	Group 4	Kohler 2800 REOZD; 2800 kWe (4035 hp)
GN21	Group 4	Kohler 2800 REOZD; 2800 kWe (4035 hp)
GN22	Group 4	Kohler 2800 REOZD; 2800 kWe (4035 hp)
GN23	Group 4	Kohler 2800 REOZD; 2800 kWe (4035 hp)
GN24	Group 4	Kohler 2800 REOZD; 2800 kWe (4035 hp)
GN25	Group 5	Cummins DQGAB; 1500 kWe (2220 hp)
GN26	Group 5	Cummins DQGAB; 1500 kWe (2220 hp)
GN27	Group 6	Kohler KD2500; 2500 kWe (3621 hp)
GN28	Group 6	Kohler KD2500; 2500 kWe (3621 hp)
GN29	Group 6	Kohler KD2500; 2500 kWe (3621 hp)
Data Center DC2		
GN30	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN31	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN32	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN33	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN34	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN35	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN36	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN37	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN38	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)

Source Code	Engine Group	Description
GN39	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN40	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN41	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN42	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN43	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN44	Group 7	Cummins DQKAB60-G6; 2000 kWe (2922 hp)
GN45	Group 8	Detroit Diesel 12V2000-R1237M36; 750 kWe (1120 hp)
GN46	Group 9	Catepillar 3516C; 2500 kWe (3634 hp)
GN47	Group 9	Catepillar 3516C; 2500 kWe (3634 hp)
GN48	Group 9	Catepillar 3516C; 2500 kWe (3634 hp)
GN49	Group 9	Catepillar 3516C; 2500 kWe (3634 hp)
GN50	Group 9	Catepillar 3516C; 2500 kWe (3634 hp)