AIR QUALITY PERMIT

Permit No.
7374-121-0929-S-01-0

Effective Date
August 29, 2014

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: **ADP Data Center (DC1)**

Mailing Address: 5880 Windward Parkway
Alpharetta, GA 30005

is issued a Permit for the following:

The operation of an electronic data processing center facility with four (4) diesel-fired 2000kW emergency use generators and the construction and operation of one (1) 2000kW emergency use generator for backup power in the event of a power loss from the grid or an onsite power system failure. 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.

Facility Location: 5880 Windward Parkway
Alpharetta, Georgia 30005 (Fulton County)

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. 22727 dated July 17, 2014; 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 **8** pages.

[Signed]
Director
Environmental Protection Division

ATTACHMENT A

Emission Unit ID	Description
EU1	Caterpillar 2000-kW diesel fired Emergency Generator
EU2	Caterpillar 2000-kW diesel fired Emergency Generator
EU3	Caterpillar 2000-kW diesel fired Emergency Generator
EU4	Caterpillar 2000-kW diesel fired Emergency Generator
EU5*	Caterpillar 2000-kW diesel fired Emergency Generator

* Emission Unit to be added to the facility.

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 entire facility nitrogen oxides (NO_X) emissions equal to or greater than 25 tons during any consecutive twelve-month period.
[Avoidance of 391-3-1-.03(8)(c)13 or NAA/NSR]

2.2 The Permittee shall limit the emergency generators (EU1 through EU5) to emergency standby operation only such that the total hours of operation for each generator are less than 500 hours during any consecutive twelve-month period. These generators shall be operated only in the event of power loss from the local grid or onsite power system failure (emergency standby mode), maintenance checks, or readiness testing.
[Avoidance of 391-3-1-.02(2)(mmm)8; 40 CFR 60.4211(f)(1) subsumed; 40 CFR 63.6640(f)(1) subsumed]

2.3 The Permittee shall operate the emergency generators (Source Codes: EU4 and EU5) according to the requirements specified below. Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited:

a. The Permittee may operate the emergency generators for any combination of the purposes specified in paragraphs i. and ii. below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 2.3b counts as part of the 100 hours per calendar year allowed.
[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.

ii. The emergency generators may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

b. The emergency generators may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Condition 2.3a. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity without written approval from the Division.
[40 CFR 60.4211(f)(3)]

2.4 The Permittee shall not cause, let, suffer, permit or allow emissions from the emergency generators (EU1 through EU3) 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 (EU4 and EU5).
[40 CFR 60, Subparts A and IIII]

2.6 The Permittee shall not discharge into or cause the discharge into the atmosphere from the emergency generators (EU4 and EU5) at the facility any visible emissions the opacity of which is equal to or greater than 20 percent during the acceleration mode, 15 percent during the lugging mode, and 50 percent during the peaks in either acceleration or lugging modes.
[40 CFR 60.4202(a)(2) and 391-3-1-.02(2)(b) subsumed]

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 generators (EU4 and EU5).
[40 CFR 60.4207 and 391-3-1-.02(2)(g) subsumed]

2.8 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 (EU4 and EU5) by complying with 40 CFR 60 Subpart IIII – "Standards for Stationary Compression Ignition Internal Combustion Engines".
[40 CFR 63, Subparts A and ZZZZ]

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.
[391-3-1-.02(2)(n)1]

4. Process & Control Equipment

4.1 Each of emergency generators (EU4 and EU5) shall be operated and maintained according to the manufacturer's 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 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 period 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.

5.2 The Permittee shall install, calibrate, maintain, and operate a non-resettable continuous monitoring system (or device) for each emergency generator to track the hours operated during emergency service and the hours of operation in non-emergency service (maintenance and/or testing), to record the reason the engine was in operation during those time, and to record the cumulative total hours of operation. 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)]

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.

7. Notification, Reporting and Record Keeping Requirements

7.1 The Permittee shall maintain monthly operating records for each emergency generator (EU1 through EU5) 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 emergency service operating time data required by Condition 7.1 to calculate monthly the twelve-month rolling total of the emergency service operating time for each of the generators 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 any of the twelve-month rolling total emergency service operating time equals or exceeds 500 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 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 any of the twelve-month rolling total of non-emergency service operating time equals or exceeds 100 hours. This notification shall include an explanation of how the Permittee intends to comply with Condition 2.3.
[391-3-1-.02(6)(b)1]

7.4 The Permittee shall use the operating time records required in Condition 7.1 and the most updated EPA- or Division-approved NOx emission factors to calculate the monthly total NOx emissions from the entire facility at this site. All demonstration calculations, including the EPA or Division-approved emission factors used in 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 monthly total NOx emissions equal or exceed 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 shall be determined by the following equation:
[391-3-1-.02(6)(b)1 and 40 CFR 70 Avoidance]

$$E_{NO_x} = \frac{\sum_{i=1}^{n}[(T_i)(W_i)(P_i)]}{(2000)}$$

Where: E_{NOx} = Monthly total NO_x emissions from all the engines/entire-facility, ton;

$\sum$ = Sum of the items inside the bracket;

T_i = Total operating time of the i^{th} engine during the month, hour;

W_i = Capacity of the i^{th} engine when operated during the month, kW;

i = i^{th} engine operated in the month;

n = Total number of the engines operated during the month;

2000 = Conversion factor from pound to ton; and

P_i = NO_x emission factor of the i^{th} engine when operated at the capacity of W_i, lb/KW-Hr.

For the purpose of this condition, following emission factors are applicable:

	Emission factor
EU1 through EU3	0.018 lb/kW-hr
EU4 and EU5	0.019 lb/kW-hr

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 entire facility 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 25 tons. This notification shall include an explanation of how the Permittee intends to comply with the NOx emission limit in Condition 2.1.
[391-3-1-.02(6)(b)1]

7.6 The Permittee shall demonstrate compliance with emission limits as specified in 40 CFR 60, Subpart IIII for emergency generators (EU4 and EU5) by purchasing an engine certified to the emission standards in 60.4205(b), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's 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 distillate fuel oil received for firing the generators at the facility complies with the applicable requirements in Condition 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]

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 Fees."