

AIR QUALITY PERMIT

Permit No.
7376-121-0868-S-01-0

Effective Date
August 26, 2010

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: **Equinix**

Mailing Address: 180 Peachtree Street NW
Atlanta, Georgia 30303

is issued a Permit for the following:

The operation of three (3) 2,500 kilowatt (kW) emergency generators with Source Codes: GN01 through GN03 and the construction and operation of three (3) 2,500 kW emergency generators (Source Codes GN04 through GN06). 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: 180 Peachtree Street NW
Atlanta, Georgia 30303 (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. 19741 dated June 9, 2010; 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

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LIST OF PERMITTED EMISSION UNITS

Source Code	Description
GN01	Caterpillar 2,500 kW distillate fuel oil fired Emergency Generator #1
GN02	Caterpillar 2,500 kW distillate fuel oil fired Emergency Generator #2
GN03	Caterpillar 2,500 kW distillate fuel oil fired Emergency Generator #3
GN04	Caterpillar 2,500 kW distillate fuel oil fired Emergency Generator #4
GN05	Caterpillar 2,500 kW distillate fuel oil fired Emergency Generator #5
GN06	Caterpillar 2,500 kW distillate fuel oil fired Emergency Generator #6

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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 emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) NO_x emissions equal to or greater than 25 tons during any consecutive twelve-month period.
[Avoidance of 40 CFR 51.165 and Avoidance of 40 CFR 70]
- 2.2 The Permittee shall limit emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) to emergency standby operation only such that the total hours of operation for each generator is less than 200 hours during any consecutive twelve-month period. These generators shall be operated only in the event of power loss from the local grid (emergency standby mode).
[391-3-1-.02(2)(mmm)7]

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- 2.3 The Permittee shall not cause, let, suffer, permit or allow emissions from emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) the opacity of which is equal to or greater than forty (40) percent opacity (6-minute average).
[391-3-1-.02(2)(b)1]
- 2.4 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 GN01 through GN06 (Source Codes: GN01 through GN06). The Permittee shall comply with emission standards for hydrocarbons (HC), NO_x, carbon monoxide (CO), and PM as listed in Table 1 of Subpart IIII during the useful life of the engine.
[40 CFR 60.4205(a) and 60.4206]

Table: NSPS 40 CFR Part 60, Subpart IIII Emission Standards For Stationary Pre-2007 Model Year Diesel Engines With A Displacement Of Less Than 10 Liters Per Cylinder And 2007-2010 Model Year Engines Larger Than 2,237 kW (3,000 Hp) And With A Displacement Of Less Than 10 Liters Per Cylinder.

	g/kW-hr (g/HP-hr)			
Pollutant →	HC	NO _x	CO	PM
Emission Limit →	1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

- 2.5 The accumulated non-emergency service (maintenance check and readiness testing) time for each of emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) shall not exceed 100 hours on a twelve-month rolling basis. Any operation other than emergency operation, maintenance check and readiness testing is prohibited.
[40 CFR 60.4211(e)]
- 2.6 The Permittee shall operate emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) with distillate fuel oil that has a maximum sulfur content of 500 parts per million (ppm) (0.05% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent. Beginning on October 1, 2010, 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.
[40 CFR 60.4207 and 391-3-1-.02(2)(g) subsumed]

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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 of emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) and control devices shall be installed and configured according to the specifications and instructions provided by the manufacturers.
[40 CFR 60.4211(b)]
- 4.2 Each of emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) 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.
[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 (Source Codes: GN01 through GN06) 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 that 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)11(i)]

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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 of emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) in emergency and non-emergency service, as recorded on the non-resettable hour meter required for each generator in Condition No. 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.
- 7.2 The Permittee shall use the records required in Condition 7.1 to determine the total operating time for each of the generators GN01 through GN06 (Source Codes: GN01 through GN06) as specified in Condition 7.1 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 monthly total operating time equals or exceeds 16.7 hours. This notification shall include an explanation of how the Permittee intends to maintain compliance with operating time limit in Condition 2.2.

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- 7.3 The Permittee shall use monthly total operating time data required by Condition 7.2 to calculate monthly the twelve-month rolling total operating time for each of the generators for each of the generators GN01 through GN06 (Source Codes: GN01 through GN06) as 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 operating time equals or exceeds 200 hours. This notification shall include an explanation of how the Permittee intends to attain future compliance with Condition 2.2.
- 7.4 The Permittee shall use monthly non-emergency service operating time records required by Condition 7.1 for each of the generators GN01 through GN06 (Source Codes: GN01 through GN06) to calculate monthly the twelve-month rolling total of the non-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 of non-emergency service operating time equals or exceeds 100 hours. This notification shall include an explanation of how the Permittee intends to attain future compliance with Condition 2.5.
- 7.5 The Permittee shall use the operating time records required in Condition 7.1 and generator manufacturer's emission factor to calculate the monthly total NO_x emissions from the generators GN01 through GN06 (Source Codes: GN01 through GN06). 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 NO_x 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 NO_x emissions from fuel combustion shall be determined by the following equation: [Avoidance of 40 CFR 51.165 and Avoidance of 40 CFR 70]

$$\text{Monthly Emissions of NO}_x \text{ (tons)} = \frac{\sum_{i=1}^6 (\text{Emission Rate @ Load } L \text{ (lb / hr)}_i) * (\text{Hrs}_i)}{2000}$$

Where:

Emission Rate @ Load L = The generator manufacturer's emission rate factor (48.11 pounds of NO_x emissions per hour) for each engine at the 100% load, unless other emission factors are approved by the Division.

Hrs = the total operating hours for each engine in the given month.

i = generator number (6 total)

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- 7.6 The Permittee shall use the monthly records required in Condition 7.5 to calculate the twelve-month rolling total of NO_x emissions from the generators GN01 through GN06 (Source Codes: GN01 through GN06) 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 total of the NO_x emissions equals or exceeds 25 tons. This notification shall include an explanation of how the Permittee intends attain compliance with the NO_x emission limit in Condition 2.1.
- 7.7 The Permittee shall demonstrate compliance with the applicable emission limits in Condition 2.4 according to one of the following methods:
[60.4211(b)]
- a. Purchasing engines certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable, for the same model year and maximum engine power. The engines shall be installed and configured according to the manufacturer's specifications.
 - b. Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test shall have been conducted using the same methods specified in 40 CFR part 60, Subpart IIII and those methods shall have been followed correctly.
 - c. Keeping records of engine manufacturer data indicating compliance with the standards.
- Or**
- d. Keeping records of control device vendor data indicating compliance with the standards.
- 7.8 The Permittee shall keep records verifying that each shipment of distillate fuel oil received for firing in the emergency generators GN01 through GN06 (Source Codes: GN01 through GN06) 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.
- 7.9 The Permittee shall submit to the Division, in writing, a copy or a sample of, as applicable, all records and calculations required by Conditions 7.1 through 7.8 within 120 after the issuance of this permit.
- 7.10 The Permittee shall furnish the Division written notification of the date of the initial startup of each of emergency generators GN04 through GN06 (Source Codes: GN04 through GN06) within 15 days after such date.

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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."