

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
BUREAU OF AIR, PERMIT SECTION  
1021 N. GRAND AVENUE EAST  
P.O. BOX 19276  
SPRINGFIELD, ILLINOIS 62794-9276  
217/782-2113

Project Summary for an Application from  
Equinix, LLC – CH3  
for  
Federally Enforceable State Operating Permit (FESOP) for  
Network Neutral Data Center  
Elk Grove Village, Illinois

Site Identification No.: 031440ANI  
Application No.: 08010054  
Date Received: January 29, 2008

Schedule  
Public Comment Period Begins: September 21, 2011  
Public Comment Period Closes: October 21, 2011

Illinois EPA Contacts  
Permit Analyst: Jocelyn Stakely  
Community Relations Coordinator: Brad Frost

## **I. INTRODUCTION**

An application has been voluntarily submitted by Equinix, LLC – CH3 for their Network Neutral Data Center in order to voluntarily incorporate federally enforceable limits. These limits would prevent the above facility from being a major source of emissions so that an operating permit does not have to be obtained under the Clean Air Act Permit Program. The proposed limits would be accompanied by recordkeeping requirements to assure that the plant is operated as a non-major source. Unlike the site's current operating permit(s), these conditions would be enforceable by both the State of Illinois and USEPA.

## **II. SOURCE DESCRIPTION**

Equinix, LLC – CH3 is a network neutral data center facility that provides internet exchange and collocation services to its customers. Facility emission sources include seventeen (17) 2,500 kW (3,634 HP) diesel-powered backup generator sets and four (4) two-celled cooling towers. The generators will be used to sustain power and cooling in the event of a utility interruption. The cooling towers will be used to remove heat from server operations. The principal air contaminant of concern is Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO) which is created by the combustion in the generators.

## **III. GENERAL DISCUSSION**

Federally Enforceable State Operating Permits (FESOPs) are federally enforceable, that is, the terms and conditions of the permits can be enforced by USEPA under federal law, as well as by Illinois government and the public under state law. These permits can establish federally enforceable limitations on the operation and emissions of a source that restrict the potential emissions of the source.

The source will be operating this plant under a FESOP because the actual emissions of the plant are below the levels at which the plant would be considered a major source under Title V of the federal Clean Air Act. However, in the absence of federally enforceable limitations, the plant's potential emissions would be such that the plant would be considered a major source. The permit acts to restrict the plant potential emissions so that it need not be considered a major source. As a result, the source does not need to obtain a Clean Air Act Permit Program (CAAPP) permit for the plant, as would otherwise be required.

The FESOP limits the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for NO<sub>x</sub>, and 100 tons of CO.

#### **IV. APPLICABLE EMISSION STANDARDS**

All emission units in Illinois must comply with state emission standards adopted by the Illinois Pollution Control Board. These emission standards represent the basic requirements for sources in Illinois. The Illinois Pollution Control Board has specific standards for units emitting volatile organic material (VOM) in the Greater Chicago Area. The specific standards for this company are New Source Performance Standards (NSPS) for Stationary compression Ignition Internal Combustion Engines, 40 CFR 60 Subparts A and III. These regulations limit the NO<sub>x</sub>, CO, VOM, PM and SO<sub>2</sub> emitted from the fuel combustion units. This source has emission limits in its permit that keep the amount of hazardous air pollutants below major levels therefore the NESHAP regulations do not apply. The application shows that the plant is in compliance with applicable state (AND FEDERAL) emission standards.

All emission units in Illinois must comply with state emission standards adopted by the Illinois Pollution Control Board. These emission standards represent the basic requirements for sources in Illinois. The board has standards for sources of Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO). The application shows that the plant is in compliance with applicable state (AND FEDERAL) emission standards.

The principal air contaminant of concern is Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO) which is created by the combustion in the generators. The facility has limited their throughput that will keep the NO<sub>x</sub> and CO emissions below the major source threshold level of 100 tons per year for NO<sub>x</sub> and CO.

#### **V. CONTENTS OF THE PERMIT**

This permit that the Illinois EPA is proposing to issue will identify the specific emission standards that apply to the emission units at the plant. The conditions of this permit are intended to ensure that the source continues to comply with applicable emission standards.

The permit would also contain limitations and requirements to assure that this plant is operated as a non-major source. The permit would limit the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons per year for NO<sub>x</sub> and CO. (Annual emissions of other pollutants from the plant are well below the 100 tons major source threshold.)

The permit sets limitations on the data center emissions. These limitations are consistent with the historical operation and capacity of the facility.

The permit conditions require appropriate compliance procedures, including inspection practices as well as recordkeeping and reporting requirements. The source must carry out these procedures on an on-going basis to demonstrate that the plant is being operated within the limitations set by the permit and the plant's emissions are being properly controlled.

## **VI. REQUEST FOR COMMENTS**

It is the Illinois EPA's preliminary determination that the source has met the requirements for issuance of its permit. The Illinois EPA is therefore proposing to issue the permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.