Focus on Yahoo! Data Center Expansion



Air Quality Program

March 2016

Yahoo! Data Center Permit Update

Yahoo! is proposing to expand its operations at their data center in Quincy, Wash. In order to do so, their air quality permit, called a "Notice of Construction Approval Order (NOC)", must be updated. A new Yahoo! data center, "Project Genesis," is included in the NOC application and will be located adjacent to the existing Yahoo! facilities.

The original permit, issued in 2011, allowed Yahoo! to install 23 diesel generators and associated cooling equipment, in order to provide emergency backup power to the facility. With the updated permit they can operate an additional 25 backup-diesel generators.

The proposed Project Genesis will include:

- Direct evaporative cooling units
- Air cleaning systems
- Boiler heating
- A 196,969 square foot building complex
- Twenty-five new diesel-powered engines. Twenty of the new engines will provide the main data center support and will be rated at 2.0 megawatt electrical capacity (MWe). The data center will also have four reserve engines rated at 2.75 MWe and one administrative support engine rated at 2.75 MWe.

The permit includes conditions to protect the public from air pollution including fuel limits and specified hours of operation for generators.

How Ecology evaluates diesel engine exhaust

When Ecology staff review a permit application for a data center, they carefully review the amount of air pollutants added to the area because of the project. Ecology cannot approve a permit that allows pollutants to be emitted often enough, or in high enough levels, to cause health problems.

Ecology's air quality experts rely on computer models to estimate where the wind will carry pollutants from diesel-powered backup generators' exhaust. They project the amount of toxic air pollutants that could be in the air.

Ecology toxicologists who specialize in understanding how pollution and chemicals affect people's health review the information. The look at the computer models and assess the possible health risks.

MORE INFORMATION

PUBLIC HEARING

March 31, 2016 at 5pm Quincy Community Center 115 F Street SW Quincy, Wa 98848

PUBLIC COMMENT PERIOD ENDS

APRIL 4, 2016

Submit comments to:

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Documents available at:

http://www.ecy.wa.gov/programs/air/quincydatacenter

Quincy City Hall

104 B Street SW Quincy, WA 98848

Quincy Library

208 Central Ave. S Quincy, WA 98848

Department of Ecology

4601 N Monroe St Spokane, WA 99205

Community Modeling

Community modeling has been used in Quincy because many companies built data centers there. Ecology evaluates the emissions from each individual data center and the combined emissions from all data centers and other sources of air pollution. This is done through a computer modeling process. The model adds any projected new data-center emissions to those from other sources of air pollution and determines if the collective emissions would likely be harmful to human health. We refer to this cumulative modeling process as "community modeling."

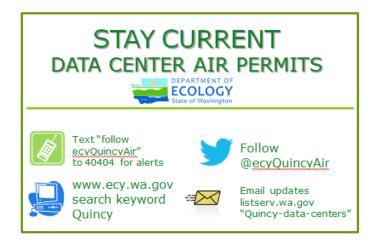


The Health Risks

Diesel-engine exhaust contains fine particles that can cause health problems for people who are exposed frequently and at high levels. The toxic air pollutants in diesel-engine exhaust include nitrogen dioxide, carbon monoxide, organic compounds, and tiny particles called diesel-engine-exhaust particulate.

Ecology evaluates the levels of all these pollutants during the permit review process. The ones most likely to be produced in high enough amounts to potentially affect health are diesel exhaust particles and nitrogen dioxide.

For detailed information on the health effects of these pollutants please read publication 11-02-005 "<u>Focus on Diesel Exhaust Health Risks</u>" on our website. It is available in English and Spanish. For more information please visit our Data Center webpage: http://www.ecy.wa.gov/programs/air/quincydatacenter.



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