



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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April 25, 2019

David Knight  
Department of Ecology  
Eastern Regional Office  
4601 N. Monroe Street  
Spokane, WA 99205-1295

**Re: Second Tier Petition by CyrusOne LLC Regarding TAP Emissions Increases from  
CyrusOne Data Center in Quincy, WA**

Dear David Knight:

The Washington Department of Ecology's Air Quality Program (Ecology) has completed a review of health risks from diesel engine exhaust particulate and nitrogen dioxide emissions from the proposed CyrusOne Data Center in Quincy, WA. Ecology concluded that the health risk is acceptable and recommends approval of the project.

CyrusOne proposes to build a new data center project in Quincy, WA. To ensure uninterrupted electrical power supply, CyrusOne proposes to use:

- Forty 2.25-megawatt diesel powered emergency generators to provide backup power to server buildings.
- Two 750-kilowatt diesel powered emergency generators to provide backup power for administrative and support functions of the data center complex.

Although the proposed engines will only operate over a limited time (up to 38 hours per year per engine), two toxic air pollutants, diesel engine exhaust particulate matter and nitrogen dioxide, may be emitted at rates that exceed screening thresholds. As a result, CyrusOne submitted a health impact assessment describing the increased health risks from their potential emissions.

Based on Ecology's review of the health impact assessment, diesel particle emissions resulted in a maximum increase lifetime cancer risk of about 9.6 in one million. The maximum risk was estimated for on-site tenant's exposure. As part of the community-wide approach in Quincy, Ecology also considered the cumulative impacts of diesel particle emissions in the area. Emissions from CyrusOne and other local sources of diesel particles could result in lifetime increased cancer

risk of up to approximately 50 in one million ( $50 \times 10^{-6}$ ) at a location about ½ mile southeast of CyrusOne property near the rail line and the southeast corner of Microsoft Columbia Data Center. Ecology's review of non-cancer hazards indicates that CyrusOne and other west Quincy data center emissions under outage scenarios may cause nitrogen dioxide levels high enough to cause temporary respiratory difficulty in people with existing respiratory conditions, and in some cases, healthy people may also be affected. Because the meteorological conditions that would cause these higher levels are infrequent, and because power outages affecting data centers are not expected to occur frequently, the concentrations responsible for these hazards are not expected to occur often or be sustained for long periods.


Ecology recommends approval of the project because:

- Ecology determined that the emission controls for the new and modified emission units represent best available control technology for toxics.
- The applicant demonstrated that the increase in emissions of toxic air pollutants is not likely to result in an increased cancer risk of more than one in one hundred thousand (10 in one million) which is the maximum risk allowed by a second tier review.
- The applicant demonstrated that the cumulative risks to residents living near CyrusOne are below the cumulative risk threshold established by Ecology for permitting data centers in Quincy (100 per million or  $100 \times 10^{-6}$ ),
- Ecology determined that the non-cancer hazard is acceptable, and.
- The likelihood of power outage occurrences is low based on the reported reliability of the Grant County PUD power system.

This project has satisfied all requirements of a second tier analysis. Ecology recommends that you incorporate our findings as part of your ambient air impacts analysis and you may begin the public comment period when you are ready to do so.

If you would like to discuss this project further, please contact Gary Palcisko at (360) 407-7338 or [gary.palcisko@ecy.wa.gov](mailto:gary.palcisko@ecy.wa.gov).

Sincerely,



Chris Hanlon-Meyer  
Science and Engineering Section Manager  
Air Quality Program

Enclosure

cc: Karin Baldwin, Ecology  
Mark Brunner, Landau Associates  
Gary Huitsing, Ecology  
Philip O'Dwyer, CyrusOne