



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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July 17, 2018

Mr. David Knight  
Air Quality Program  
Eastern Regional Office  
4601 N. Monroe Street  
Spokane, WA 99205-1295

**Re: Second Tier Toxics Review Petition by Microsoft Corporation MWH Data Center,  
Phases 03/04/05/06, Quincy, WA**

Dear Mr. Knight:

The Washington Department of Ecology's Air Quality Program (Ecology) has completed their review of health risks from diesel engine exhaust particulate (DEEP) and nitrogen dioxide (NO<sub>2</sub>) emissions from the proposed Microsoft Corporation (Microsoft) MWH Data Center (MWH) Phases 03/04/05/06 in Quincy, WA.

Microsoft proposes to expand the MWH data center in Quincy, WA. The expansion will include:

- Sixty-eight (68) 3.0 megawatt diesel-powered emergency generators
- Four diesel-powered emergency generators less than or equal to 1.5 megawatts

Ecology's review indicates that the proposed project could result in an increased cancer risk of up to **three in one million** ( $3 \times 10^{-6}$ ) at the maximally impacted residential location, which occurs to the northeast of MWH.

As part of the community-wide approach in Quincy, Ecology also considered the cumulative impacts of DEEP emissions in the area. Emissions from MWH-03/04/05/06 and other local sources of DEEP could result in lifetime increased cancer risk of up to approximately 91 in one million ( $91 \times 10^{-6}$ ) at a location to the southeast of MWH and just south of State Route 28. The cumulative non-cancer hazard quotient at this location is much lower than unity (one) meaning that non-cancer adverse health effects are unlikely.

Ecology also considered short-term impacts of NO<sub>2</sub> emitted from numerous emergency engines in the event of a simultaneous power outage affecting west-side Quincy data centers. This

Mr. David Knight  
July 17, 2018  
Page 2

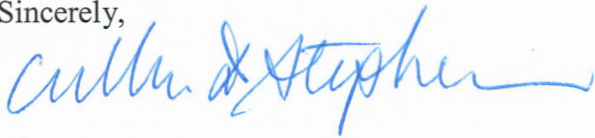
evaluation indicated that elevated NO<sub>2</sub> levels could occur, but the combined probability of an outage coinciding with unfavorable meteorology is very low.

The applicant has satisfied all requirements of a second tier analysis. Ecology finds that Microsoft's project-related health risks are permissible under WAC 173-460-090 and the cumulative risk from DEEP emissions in Quincy is less than the cumulative maximum risk threshold established by Ecology for permitting data centers in Quincy (100 per million or 100 x 10<sup>-6</sup>). 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. Ecology also recommends:

- Periodic follow-up into the frequency of power outages impacting Quincy data centers. This will help to determine if assumptions used to characterize NO<sub>2</sub> hazards continue to be appropriate.
- Engaging local emergency planners and data center operators to discuss strategies for reducing potential impacts during a prolonged power outage.
- Developing a strategy for addressing potential impacts from continued data center growth in Quincy.

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,



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

ch-m/te

Enclosure

cc: Karin Baldwin, Ecology  
Mark Bruner, Landau Associates  
Jaymes Kirkham, Microsoft