



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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June 20, 2012

Ms. Karen Wood  
Department of Ecology  
Eastern Regional Office, Air Quality Program  
4601 N. Monroe Street  
Spokane, WA 99205-1295

Dear Ms. Wood:

**Second Tier Petition by Vantage Data Centers Management Company, LLC (Quincy)**

The Washington State Department of Ecology's Air Quality Program (Ecology) has completed their review of health risks from diesel engine exhaust particulate (DEEP) emissions from the proposed Vantage Data Centers Management Company, LLC (Vantage) Data Center in Quincy, Washington.

Ecology's review indicates that the proposed project could result in an increased cancer risk of up to seven in one million ( $7 \times 10^{-6}$ ) at the maximally impacted residential location, which occurs along the residential property boundary immediately to the southwest of Vantage. A lower risk of about four in one million was estimated at the location of an existing structure on the same property. Ecology's review of non-cancer hazards indicates that the chronic non-cancer hazard quotient attributable to Vantage's DEEP emissions is much lower than unity (1) meaning that chronic non-cancer adverse health effects are unlikely. Because the increase in cancer risk attributable to the new data center alone is less than the maximum risk allowed by a second tier review, which is 10 in one million, and the non-cancer hazard is acceptable, the project is approvable under WAC 173-460-090.

As part of the communitywide approach in Quincy, Ecology also considered the cumulative impacts of DEEP emissions in the area. Emissions from Vantage and other local sources of DEEP could result in lifetime increased cancer risk of approximately 28 in one million ( $28 \times 10^{-6}$ ) at a location directly to the southwest of Vantage. The cumulative non-cancer hazard quotient at this location is much lower than unity (1) meaning that non-cancer adverse health effects are unlikely.

Ecology recommends approval of the proposed project because project-related health risks are permissible under WAC 173-460-090 and the cumulative risk from DEEP emissions in Quincy

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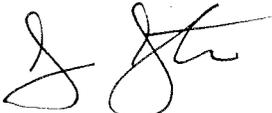
is less than the cumulative maximum risk threshold established by Ecology for permitting data centers in Quincy (100 per million or  $100 \times 10^{-6}$ ). Ecology recommends that Vantage be required to communicate health risks posed by their emissions to current residents near Vantage and potential new homeowners at undeveloped parcels adjacent to Vantage or to the local regulatory agency responsible for zoning and development in the affected area.

Although Vantage was not required to evaluate short-term impacts of nitrogen dioxide (NO<sub>2</sub>), the HIA provided a brief evaluation of acute non-cancer hazards. Generally, Vantage's emissions by themselves are not expected to result in acute non-cancer hazards, but cumulative emissions of multiple emergency engines at other data centers could combine to create short-term NO<sub>2</sub> levels of concern. Previous evaluations of simultaneous emergency engine emissions in Quincy indicate that elevated NO<sub>2</sub> levels could occur, but the likelihood of a system-wide outage coinciding with unfavorable meteorology is very low. Ecology staff are currently updating cumulative short-term NO<sub>2</sub> analyses to be used to inform communications with the city of Quincy and interested community members.

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,



Jeff Johnston, Ph.D.  
Manager, Science and Engineering Section  
Air Quality Program

jj/te

Enclosure

cc: Mike Duffy, Vantage  
Greg Flibbert, Ecology  
Robert Koster, Ecology  
Jim Wilder, ICF International