



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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May 11, 2017

Mrs. Karen Wood
Air Quality Program
Eastern Regional Office
4601 N. Monroe Street
Spokane, WA 99205-1295

Re: Revised Second Tier Petition by Vantage Data Centers Incorporating Modifications to an Existing Permit, Vantage Data Center in Quincy, WA

Dear Mrs. Wood:

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 Vantage Data Centers (Vantage) facility in Quincy, WA. Ecology concludes that health risks are acceptable and recommends approval of the project.

Ecology previously permitted Vantage to operate 17 three Megawatt emergency generators. Vantage installed five of these 17 generators, but add-on emission controls on the diesel engines did not function as designed. As a result, Vantage requested a revised permit to reflect changes in emissions resulting from the removal of add-on emission controls on five existing engines and the elimination of the requirement to install the controls on the remaining 12 engines. Vantage also requested flexibility in how they operate their engines, and proposed increased stack heights on the 12 engines that have not yet been installed.

Because proposed changes to the permit resulted in potential increases in toxic air pollutant, Vantage was required to resubmit a health impact assessment describing the increased health risks posed by emissions of diesel engine exhaust particulate and nitrogen dioxide.

Diesel particle emissions resulted in a maximum increase lifetime cancer risk of about 9.9 in one million. The maximum risk was estimated at a residential location southwest of Vantage. As part of the community-wide approach in Quincy, Ecology also considered the cumulative impacts of diesel particle emissions in the area. Emissions from Vantage and other local sources of diesel particles could result in lifetime increased cancer risk of up to approximately 39 in one million (39×10^{-6}) at the residential location to the southwest of Vantage.



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Ecology's review of noncancer hazards indicates that Vantage and other Quincy data center emissions under outage scenarios may cause nitrogen dioxide levels to be of concern for people with existing respiratory conditions. 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 sustained for long periods of time.

Ecology recommends approval of the proposed project because project-related health risks are permissible under WAC 173-460-090 and the cumulative risk from diesel engine exhaust particulate emissions in Quincy is less than the cumulative maximum risk threshold established by Ecology for permitting data centers in Quincy (100 per million or 100×10^{-6}).

This project has satisfied all requirements of a second tier analysis. The findings of the second tier toxics review should be included as part of the ambient air impacts analysis. Ecology also recommends that outages at all Quincy data centers be tracked and re-evaluated periodically to inform emergency management planning and to determine if the assumptions used in characterizing hazards during outage scenarios remain plausible.

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

Sincerely,



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

Enclosure

cc: Mark Bruner, Landau Associates
Jolaine Johnson, Ecology
Mark Johnson, Vantage Data Center