

Homes near rail lines face exposure to harmful emissions: study

University of Washington study sparks renewed calls for health study for Surrey coal project

BY GORDON HOEKSTRA, VANCOUVER SUN MARCH 23, 2014

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A train loaded with coal winds its way into the mountains of West Virginia in this file photo. A new study found residents living near rail lines face increased exposure to harmful microscopic particles from diesel emissions.

Photograph by: JEFF GENTNER, AP

A University of Washington study has found residents near rail lines face increased exposure to harmful microscopic particles from diesel emissions.

The study also found residents are exposed to larger particles, possibly from coal trains.

The study, accepted for publication this month in the online journal Atmospheric Pollution Research, provides some of the first measurements of emission effects of coal train traffic through neighbourhoods in the Pacific Northwest.

It addresses an issue at the heart of a heated debate over proposals to increase coal exports to Asia on both sides of the border. The study has also fuelled calls by B.C. activists for a comprehensive health impacts study of a \$15-million coal-handling project in Surrey.

The \$24,000 study was financed through crowdfunding from 270 individuals and a donation from the Sierra Club.

University of Washington atmospheric scientist Dan Jaffe said while there is air quality data available in Washington State and British Columbia, it is not focused on rail lines.

"We wanted to find a real home where people actually live (next to a rail line) to see what were air quality impacts. They were surprisingly significant," Jaffe said in an interview Sunday.

"We do sort of go out looking for a worst-case scenario, but worst case only in the sense that this is actually a place where people live," Jaffe said from Italy, where he is teaching under a prestigious international exchange Fulbright Award.

The study examined exposure at a home in Seattle last summer, about 20 metres from a rail line, and another location in the rural Columbia River Gorge area.

For the month that measurements were taken at the Seattle residence, the study found the level of tiny particles — about 1/30 the size of human hair — was more than double the level than at coastal locations away from railroads.

The measurements also showed the trains produced substantial quantities of diesel exhaust linked to microscopic particles.

The results showed that after passage of coal trains, there was a statistical increase in larger particles compared to other train types such as freight and passenger trains.

These larger particles are most likely consist of coal dust, the study concludes.

More research is needed into the coal dust issue — something that is planned for this summer, Jaffe said.

A future increase in rail traffic will increase microscopic particle exposure in the Seattle area, and for some homes may result in concentrations that exceed U.S. air quality guidelines, says the study.

The results were less conclusive for the Columbia River George area.

Jaffe acknowledged that the one-month time period of the study is a limitation.

The study was launched, in part, because there are proposals to increase rail traffic for coal-export terminals in Washington State, which have faced stiff opposition from environmental and community groups.

Coal exports are also increasing in B.C.'s Lower Mainland, with a \$200-million expansion at Neptune Bulk Terminals in North Vancouver already approved and the \$15-million coal-handling proposal at Surrey Fraser Docks still under review.

Port Metro Vancouver did not respond to a Vancouver Sun question on whether it would consider the new study in its Surrey review decision.

Jaffe sent the study findings to Port Metro Vancouver and the Canadian government.

In a response dated March 13, Environment Minister Leona Aglukkaq said the evidence the federal government is aware of shows fugitive coal dust from rail poses a negligible risk to wildlife, and limited risks to water or air quality.

Aglukkaq did not address the issue of diesel emissions.

B.C. activist Paula Williams said the B.C. government needs to order a comprehensive health impacts assessment of the Surrey project.

"As far as I'm concerned, this (study) should be an indication that, 'Ok, hold on, we have a problem here. We need to look at this further.' What more do they want? This is important," said Williams, a spokeswoman for the Lower Mainland-based Communities and Coal.

The U.S. business group, Alliance for Northwest Jobs and Exports dismissed the Jaffe study, saying it offers no link to coal dust and air quality.

ghoekstra@vancouversun

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