

## Appendix A

Air Quality Assessment  
Niagara to GTA Corridor  
Planning & EA Study Phase 1  
August 4, 2010  
Completed by RWDI Air Inc  
Guelph, ON

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RWDI appear to have limited analysis to short-term (1 hr and 24 hr) exposures of Criteria Air Contaminants (CACs). Any analyses of long-term (annual average) exposures, which for PM<sub>2.5</sub> are critical for a health risk analysis, have not been provided.

Because of the focus on short-term exposure, they have not dealt with NO<sub>x</sub> as a precursor pollutant to the generation of PM<sub>2.5</sub>. Thus the true health risk of exposure to PM<sub>2.5</sub> in the study area would be substantially underestimated, if the results of this study were used to estimate the impact of existing or proposed road transportation on human health based on acute exposure alone.

In addition, RWDI appears to rely on Ontario “criteria” to be protective of public health. There is good evidence to the contrary (e.g., the Canadian Medical Association 2008 study). They claim that adverse effects may only occur within an “area of influence” of a few hundred metres from a roadway based on the Ontario “criteria”.

In fact, based on annual average values, and health risks as defined in the CMA 2008 study, the true “area of influence” is likely to be much larger. As a consequence, the estimated community health risks would be much greater than those based on acute exposure alone.

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