

March 2004

PRELIMINARY AIR QUALITY ASSESSMENT AT THE WINDSOR AMBASSADOR BRIDGE

Air Quality Monitoring

The Ministry of the Environment has completed a preliminary air quality study to assess the potential impacts of truck traffic delays at the Ambassador Bridge border crossing in the City of Windsor.

The ministry has been monitoring air quality in the Windsor area for many years to determine the sources of emissions and levels of air contaminants. This special study was designed to assess the air quality impacts of the traffic emissions along the Huron Church corridor. The study took place during selected days in the fall of 2002 and the spring and summer of 2003.

Government Actions

Clean air is essential to protecting the health of our citizens and to developing an environment we can all enjoy. This government is committed to protecting and maintaining safe, clean, liveable communities, and since October 2003 has taken the following significant steps to improve air quality:

- contributing to a joint \$300 million federal-provincial investment to help improve the Windsor Gateway and reduce traffic congestion;
- bringing in North America's toughest emission test standards for large diesel trucks and buses effective on April 1, 2004; and
- committing to developing cleaner energy sources to replace coal-fired generation in Ontario by 2007.

Background

Heightened security at the Ambassador Bridge international border in Windsor has resulted in long delays, especially for the large trucks that use this as a point of entry into the United States. Long lines of idling trucks on Huron Church Road can persist for hours at a time. Local residents have raised concerns about the impact of the truck emissions on local air quality.

New portable equipment has permitted the ministry to measure some components of diesel emissions: volatile organic compounds (VOCs) and particulate matter (PM).

VOCs are known to contribute to smog and may have other health effects. High levels of particulate matter are associated with damage to agricultural crops, vegetation and homes; corrosion; reduced visibility and impacts on human health.

Results

The key results of the study are:

- There was no significant increase in the concentration of Volatile Organic Compounds (VOCs).
- During normal traffic movement (no delays), the average increase in particulate matter adjacent to the road was minimal.
- During events when truck traffic was backed up along the Huron Church corridor, the increase in particulate matter was sufficient to increase the Air Quality Index by one complete level for fine particulate matter (PM_{2.5}) in the monitored area.

For example: a “Very Good” AQI reading would result in “Good” and an AQI which may have been “Moderate” would be “Poor” based upon particulate levels alone.

- Increases in particulate matter above ambient conditions were measured at distances from a few metres to 300 metres from the roadway.
- The extent of the increased particulate matter was dependent upon traffic volume, length of delays and meteorological conditions (wind direction and speed).

Next Steps

Based on the findings of this study, the ministry is developing an air dispersion model that will assist in assessing air impacts of traffic congestion by examining the effects of a wide variety of weather and traffic patterns.

The ministry has provided the findings of this air quality study to local health and municipal officials, as well as provincial and federal agencies having jurisdiction over issues affecting road traffic at the border. The local Medical Officer of Health will review the study for any concerns regarding potential health impacts.

Additional Information

To obtain additional copies of the air quality survey or for more information, please contact the Ministry of the Environment at 1-800-265-7672 or visit our website at www.ene.gov.on.ca

- 30 -

Contact:
Brian Boudreau
Ministry of the Environment
(519) 873-5055

Disponible en français

For more information visit www.ene.gov.on.ca