

TO: Chair and Members of the Board of Health

FROM: Christopher Mackie, Medical Officer of Health

DATE: 2015 March 19

TRICHLOROETHYLENE ISSUE – Highbury Avenue and Brydges Street Area

Recommendation

It is recommended that Report No. 026-15 re Trichloroethylene Issue – Highbury Avenue and Brydges Street Area be received for information.

Key Points

- Trichloroethylene (TCE), an environmental contaminant, is present in the groundwater in the Highbury Avenue and Brydges Street area of the City of London
- Sampling and analyses reveal that this presents a very low health risk to nearby residents due to the potential for TCE to evaporate out of groundwater and enter the indoor air of nearby houses
- MLHU, in collaboration with The MOECC and The City of London, communicated the health risk directly to those affected and informed the public through the media
- Further assessment of the situation continues and any changes to the human health risk assessment will be communicated in a timely manner

Background

The Ministry of Environment and Climate Change (MOECC) informed MLHU staff in November, 2014, of the presence of trichloroethylene (TCE) in groundwater in the area of Highbury Avenue and Brydges Streets in the City of London. TCE is a chemical used mainly in industrial and commercial settings for the degreasing of metal parts. It can contaminate groundwater through improper disposal, storage leaks, and spills. Once in groundwater, it can evaporate into the soil vapour (air spaces between soil particles) and migrate up through the soil to enter indoor air through the foundations of buildings. To assess this potential health risk in the Highbury and Brydges area, soil vapour analyses were conducted on municipal property in front of some houses along Brydges Street in early 2015. The results were used to estimate whether TCE might be entering the indoor air of basements in nearby residences and if so, at what levels. The estimates revealed that there was potential for a very low level health risk for some area residents to be exposed to higher than desired levels of TCE in their indoor air.

Health Risk

The primary health concern associated with long term exposure to low levels of TCE is the risk of developing some forms of cancer. There is some evidence that TCE may be associated with some other health outcomes but that evidence is inconclusive. The level of cancer risk depends upon the level of TCE in the indoor air and the length of time one is exposed. The indoor air levels estimated for the houses in the Highbury and Brydges area represent a very low risk of approximately three (3) cases of cancer for every 100,000 people exposed over their entire lifetimes. On average, 40,000 of every 100,000 people will develop some form of cancer in their lifetime.

Risk Communication

MLHU, in collaboration with The MOECC and The City of London, notified directly those residents in the Highbury and Brydges area most likely to be affected by this risk. Public Health Inspectors (PHI) from our Environmental Team delivered a cover letter ([Appendix A](#)) and accompanying TCE Fact Sheet/Q&A document ([Appendix B](#)) door to door on March 10th and responded to questions from residents. This direct risk communication was followed by a media release ([Appendix C](#)) later that day. A direct TCE phone line continues to be monitored by PHIs to respond to further questions from Highbury and Brydges area residents and others about this issue.

Next Steps

The MOECC is continuing its work to identify the source and extent of the TCE contamination in the Highbury and Brydges area. The City of London is arranging for indoor air testing at certain houses based upon their location relative to the soil vapour testing sites. The results of that testing will help to further assess health risk and will provide valuable information to inform the need and location of future testing. MLHU staff will continue to collaborate on this issue with our partners at The MOECC and The City of London and will assess and communicate to those affected in a timely manner any changes in the associated health risk.

This report was prepared by Mr. Wally Adams, Director of Environmental Health and Chronic Disease Prevention Services.



Christopher Mackie, MD, MHSc, CCFP, FRCPC
Medical Officer of Health