




Hamilton

INFORMATION REPORT

TO:	Mayor and Members Board of Health
COMMITTEE DATE:	April 20, 2015
SUBJECT/REPORT NO:	Review of Gasplasma Plant Proposal from Port Fuels & Materials Services Inc. - BOH15012 (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Matthew Lawson (905) 546-2424, Ext. 5823
SUBMITTED BY:	Elizabeth Richardson Medical Officer of Health Public Health Services Department
SIGNATURE:	

Council Direction:

Not Applicable

Background:

On December 22, 2014, Port Fuels & Materials Services Inc. (PFMSI) filed a Notice of Completion with the Ontario Ministry of the Environment and Climate Change (MOECC) for their proposed Energy-From-Waste (EFW) facility. The filing of this Notice was done in accordance with the Environmental Screening Process defined in the Waste Management Projects Regulation (Ontario Regulation 101/07) of the *Environmental Assessment Act*.

Process

The Ontario Public Health Standards (OPHS) require the Board of Health (BOH) to "be aware of and use epidemiology to influence the development of healthy public policy and its programs and services to reduce or eliminate the burden of illness from health hazards in the environment" (OPHS, 2008, revised 2014). To support this requirement and according to the legislative authority and responsibilities of the Medical Officer of Health, Public Health Services (PHS) will provide comments through the established regulatory processes to the MOECC on proposed projects which have the potential to significantly impact the health of Hamilton residents.

PHS undertook an independent process to gather information to inform comments to the MOECC on the proposed EFW facility. During this process, PHS has worked with other City departments, including Planning and Legal to gather and share relevant information. PHS staff reviewed the Environmental Screening Report (ESR) that was prepared by Conestoga-Rovers Associates (CRA) on behalf of PFMSI. Due to the technical nature of the Air Quality Assessment (AQA) work contained within the ESR, PHS retained Golder Associates, a qualified third-party engineering consultant, to perform a peer review of the AQA. In addition to this peer review, PHS sought scientific and technical advice from experts at Public Health Ontario (PHO) regarding the validity of the Human Health Risk Assessment (HHRA) that was voluntarily included as part of the ESR. The reports produced by Golder Associates and PHO were shared with the proponent and a meeting was held to allow the proponent and CRA to respond to the reports. The reports from Golder Associates and PHO are attached as Appendices A and B, respectively. CRA's responses to the Golder Associates and PHO reports are included as Appendices C and D, respectively. Also, included is Golder's final review of responses submitted by CRA (Appendix E), as well as PHO's final review of responses submitted by CRA (Appendix F).

Findings

The proposed EFW facility is a promising, innovative technology to manage solid waste that could position Hamilton as a municipal leader in supporting environmentally 'green' technology. The ability to minimize negative environmental impacts can clearly have positive implications for public health. Particularly relevant to this proposal is the sourcing of product being within a 5 km radius (PFMSI, personal communication, March 26, 2015) which will decrease the emissions from truck transportation of waste that would have previously been trucked to a more distant landfill site. Additionally, the proponent has described a carbon dioxide (CO₂) capture process (PFMSI, personal communication, March 26, 2015) which will minimize the release of CO₂, thus not contributing additional greenhouse gases.

The ESR prepared by the proponent was conducted according to a standard, recognized methodology. However, due to the existing uncertainties identified in the current ESR and HHRA produced by the proponent, additional information as described below is needed to form a more complete understanding of the potential impacts to public health.

Based on the reviews by PHS, PHO and Golder Associates, the following areas of concern were identified:

- The Peer review performed by Golder Associates (Appendix A) identified a number of concerns and comments about the AQA produced by the proponent. Responses to these concerns were provided by CRA (Appendix C), and a final review of CRA's responses was provided by Golder Associates (Appendix E). The conclusions drawn in the HHRA are based on the AQA. As one is drawn from the

other, any deficiencies identified in the AQA negatively impact the confidence in the accuracy and validity of the HHRA. In particular, the assumptions of modelling and conclusions rely heavily on a pilot site in Swindon, United Kingdom which operates intermittently and at a much lower capacity than the proposed project in Hamilton (100 kg waste/hour and 15,000 kg waste/hour, respectively) (PFMSI FAQ, www.pfmsi.net);

- The HHRA baseline conditions only accounted for ambient air; baseline soil and vegetation conditions were not measured or qualitatively assessed in the HHRA. While the proponent has calculated the risk of cancer due to any soil or vegetative depositions to be extremely low (PFMSI, personal communication, March 26, 2015), transparency with the models or formulas used to reach this conclusion would be helpful;
- The operation upset scenario modelled, would be improved upon if it also considered emissions that may result if air pollution controls are not working as intended or malfunction. Alternatively, CRA could clarify how this has been accounted for with the continuous emission monitoring system and/or any other contingencies in the facility design. It would be useful to provide clarification in the HHRA of which scenarios were considered but not evaluated; and
- Since the proponent did not assess the unintentional, potential health equity impacts (positive and negative) on the local community, a Health Equity Impact Assessment (HEIA) would contribute to a better understanding of how this project could disproportionately disadvantage or advantage the health of certain groups of Hamilton residents. The Ontario Ministry of Health and Long-Term Care (MOHLTC) developed a HEIA tool which could be applied in this circumstance as an enhancement to the HHRA (MOHLTC, <http://www.health.gov.on.ca/en/pro/programs/hea/>). It is expected that by conducting a HEIA, potential negative health impacts on specific groups of people could be mitigated and any positive benefits could be maximized (MOHLTC, 2012).

Next steps

Based upon the concerns identified above, the Medical Officer of Health will be submitting a letter to the Director of Approvals of the MOECC asking to identify a process through which the proponent can address these concerns, which could include an individual environmental assessment. PHS would be a willing participant in the process identified by the MOECC or through voluntary discussions with the proponent to resolve these outstanding issues.