



Memorandum

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To: Geoff Rathbone, General Manager, Solid Waste Management Services

From: Dr. David McKeown, Medical Officer of Health

Date: June 11, 2010

Subject: Mixed Waste Processing Study Health Impact Assessment (HIA) Recommendations

Toronto Public Health (TPH) staff have appreciated working with Solid Waste Management Services (SWMS) on the health impact assessment (HIA) for the Mixed Waste Processing Study. The initial HIA screen identified mechanical biological treatment with anaerobic digestion (MBT with AD) as the technology option with the fewest potential health impacts. I understand that this technology option for the residential mixed waste processing facility also presented favourably based on study technology screening criteria, life cycle assessment (LCA) and affordability considerations. I also understand that the City-owned land next to Green Lane Landfill in the Township of Southwold was the only site in the candidate sites list that had sufficient area for the full processing and final curing operations.

Based on staff suggestions, and to address the receiving community's request to be involved in the HIA, a workshop was organised on March 8th, 2010 at the Green Lane Landfill Administration Office. Representatives from four stakeholder groups (First Nations, public health, local government and public liaison committee) were invited. Seventeen people participated in the workshop, including Mr. James McIntyre, Mayor of the Township of Southwold and Dr. Frank Warsh, Medical Officer of Health for Elgin-St Thomas Public Health. The purpose was to better understand the community's perspectives on potential health impacts from the proposed facility and to identify any mitigation efforts that could be adopted to address these concerns. Local stakeholders identified both negative and positive potential impacts that could result from building and operating the mixed waste processing facility. Based on the outcomes of the HIA and the workshop I recommend the following.

- (1) All stakeholder groups identified odour as a priority potential health concern. The Township of Southwold Council representatives specifically identified the need to contain the windrows within a building. Building an enclosure to contain the windrows is one of the more costly odour mitigation strategies and could add substantially to the project's costs. Your staff have identified enclosing the windrows with a fabric cover system specifically designed for compost operations as the preferred measure to address odour. Once the facility is built, I recommend that you monitor the effectiveness of this strategy and, if it does not prove to be sufficient to address the community's concerns of odour from composting, explore additional measures in consultation with the local public liaison committee and my staff.

- (2) The stakeholder representatives from the local public health units requested that the City conduct a cumulative impact assessment to better understand the extent to which adding a new facility would impact the whole airshed. I encourage you to conduct a more detailed assessment in collaboration with TPH staff. This assessment should aim to evaluate potential impacts associated with exposures to chemicals released during the construction and operation of the proposed project. Since air is the main route of human exposure to environmental releases from the proposed facility and air quality is of primary concern to local stakeholders, the focus of the assessment should be an evaluation of potential exposures to chemicals in ambient air in the airshed of the facility and surrounding communities. The assessment should take into account existing background ambient air concentrations and consider exposures to sensitive populations (i.e., First Nations, young children and elderly) in the surrounding communities. The assessment should use conservative assumptions to ensure that potential exposures and health risks are not underestimated and incorporate the results from the life-cycle assessment of the facility.
- (3) To ensure that health and environmental concerns identified in the HIA are addressed in the design and operation of the facility, I recommend that the terms of reference for the contractors require them to clearly identify the design and operational elements that have been incorporated to mitigate or minimize health and environmental impacts.
- (4) Stakeholders groups also identified a number of opportunities for potential positive impacts. These included an educational centre to promote waste diversion and programs for schools, strengthening of local recycling programs, and research on the beneficial use of the compost-like output of the facility, including pilot programs with the local farmers. I encourage you to pursue these opportunities through the procurement process for the design, permitting and operation of the facility.

I will be submitting a report "Mixed Waste Processing Study Health Impact Assessment" to the June 28, 2010 Board of Health meeting, which will include the summary of the HIA which is attached. You or your staff are most welcome to attend.

I am happy to discuss these recommendations further with you. I look forward to our continued collaboration with SWMS and the Residual Waste Working Group as we move into the next stages. For further information please contact Ronald Macfarlane of my staff (e-mail rmacfar3@toronto.ca; tel.: 338-8097).



Dr. David McKeown
Medical Officer of Health

Attachment: Report on the Health Impact Assessment (HIA) for the Proposed City of Toronto Mixed Waste Processing Facility