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Evaluation of Odour Emissions & Dispersion Mitigation Strategies for the Tipping Area of Municipal Solid Waste Landfills

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Solid waste from residential and commercial sources is collected by municipalities and transported and buried into in-ground pits called Municipal Solid Waste Landfills (MSW). Anaerobic decomposition by bacteria found in the disposed waste generates Land Fill Gas (LFG) which, if uncontrolled, transports through the buried waste and escapes into the surrounding atmosphere where it disperses as a pollutant. The active area of MSWs, the tipping area, is unsuitable for gas collection and typically uses basic cover materials as a method of LFG sequestration. My research, a Mitacs funded collaboration between the City of London and UWO engineering, focuses on developing a method to: a) determine the rate of LFG emissions from the tipping area of an active MSW, and b) explore the use of tailored biochar mixtures in application as an improved method for sequestering LFG from the tipping area of an active MSW.