STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

October 16, 2009

1. Bill Number and Sponsor:

House Bill (HB) 5334
Representative Jeff Mayes, et al
Referred to Committee on Energy and Technology

2. Purpose:

HB 5334 amends Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, to allow yard clippings to be disposed of in a landfill that qualifies as a Landfill Energy Production Facility (LEPF).

As currently drafted, an LEPF is a landfill in which its operating license authorizes the recovery of gas produced by waste in the landfill as a source of energy for a demonstrated use, and an operable gas collection system exists or is planned for those cells of the landfill where yard clippings are disposed.

The bill also requires an LEPF to report the amount of gas recovered during the year and whether the gas was used as a source of energy or flared. An LEPF will be required to recover and beneficially reuse not less than 70 percent of the annual gas production from the landfill at least every other year.

3. How This Legislation Impacts Current Programs in the Department:

HB 5334 will have a small impact on the current programs in the Department of Environmental Quality (DEQ), mainly on the Recycling Technical Assistance Program in the Waste and Hazardous Materials Division (WHMD) and the air emissions staff in the Air Quality Division. The DEQ will be responsible for collecting additional data from the landfills, and the DEQ district staff will have a role in ensuring compliance with the requirements for being an LEPF.

4. Introduced at Agency Request:

No.

5. Agency Support:

No.

6. Justification for the Department's Position:

Landfilling yard clippings is a step back from the progress made since the landfill ban on yard clippings disposal took effect in 1995, as a result of 1990 PA 264 (Act 264). The original intent of Act 264 was to conserve landfill space for materials that are harmful or difficult to manage. As was recognized in 1995 when the yard clippings ban went into effect, landfilling yard clippings is a poor use of resources. The relaxation of this ban would negatively affect the Michigan yard clippings industry's 150 composting facilities. Many of them are privately run small businesses that create local jobs. This legislation negates the efforts of the past legislation to ban yard clippings from landfills and hinders the efforts of communities that are working to eliminate landfill disposal of compostable materials rather than encourage the increased use of landfills for organic materials that can be beneficially used.

The landfilling of yard clippings is inconsistent with the updated state Solid Waste Policy because energy production from landfills is not the best use of yard clippings. Furthermore, the addition of yard clippings is not necessary to maximize energy recovery from landfills. There are other more efficient methods to manage yard clippings.

If the ultimate goal is to harvest energy from yard clippings, more efficient technologies such as anaerobic digestion with composting exist that do not send the yard clippings on a one-way trip to a landfill but enable the nutrients of the byproducts to be used again for soil enhancement. Although this bill seeks to increase the capture and use of landfill methane, a substantial portion of landfill gas is currently not being utilized. Before adding additional organics to landfills, Michigan should first work at capturing the methane currently being released and not utilized.

The DEQ views this legislation as a step backwards from the progress the state has made in developing composting programs and using wastes, such as yard clippings, as a resource.

7. State Revenue/Budgetary Implications:

It is unlikely that all landfills and/or communities eligible would elect to become landfill energy production facilities. If an estimated half of all of the 1,107,000 cubic yards of yard clippings are landfilled instead of composted at registered composting facilities, then the DEQ will receive an additional $38,745 annually from the $0.07 per cubic yard Solid Waste Surcharge paid to landfill that material. However, if half of the registered composting facilities close, then the DEQ will receive approximately $10,000 less in compost registration fees each year.

8. Implications to Local Units of Government:

Some local governments may see a decrease in their solid waste management costs, while others will likely see an increase. Yard clippings composting tip fees at composting facilities are typically less expensive than solid waste disposal charges. If existing yard clippings composting facilities close as a result of this bill, municipalities will have fewer alternatives for managing their yard clippings and will be forced to pay the higher landfill disposal fees. Furthermore, a large portion of yard clippings are currently never picked up at the curb. They are left on the lawn or composted in backyard composting piles. This bill may result in the need to manage a larger volume of waste than is managed under the current landfill ban if convenient curbside disposal of yard clippings becomes available as a result of this bill.

9. Administrative Rules Implications:

None.

10. Other Pertinent Information:

HB 5334 is identical to Senate Bill 725.

Landfills are not 100 percent efficient at collecting the methane they generate. Therefore, landfills release more greenhouse gas than other management options for yard clippings. Aerobic composting of yard clippings results in the generation of carbon dioxide. Methane is 21 times more potent than carbon dioxide at causing global climate change. HB 5334 only requires that 70 percent of the annual gas production be utilized at least every other year, and further allows flaring of the gas for two years or an extended time frame as determined by the landfill.

Granger III & Associates, LLC (Granger), produced a report titled "Examining Increased Renewable Energy Production from Landfill Gas in Michigan" that advocates for lifting Michigan's yard clippings disposal ban. WHMD staff prepared a briefing paper titled "Yard Clippings Landfill Disposal Prohibition Exemption" that describes in greater detail the arguments against HB 5334.

This bill describes how the percentage of landfill gas recovered shall be calculated and defines one method that requires the use of the U.S. Environmental Protection Agency (U.S. EPA) Landfill Gas Emission Model (LandGEM) and Clean Air Act default values; however, the values specified in the bill are not the Clean Air Act default values currently utilized in LandGEM. If the true Clean Air Act default values were used, the predicted gas generation rates would overestimate the amount of gas generated by the landfill and, therefore, underestimate the capture

efficiency of the landfill. Conversely, the potential methane generation capacity value (L_o) proposed in HB 5334 is higher than the U.S. EPA inventory value utilized in the LandGEM model. Additionally, the U.S. EPA is in the process of updating the support document for the LandGEM model that may result in additional alterations to the default values. This bill also does not allow the DEQ to require that other emission factors more representative of landfill operational and/or waste acceptance practices be utilized, instead leaving the determination of whether the default emission factors are appropriate in the hands of the landfill operator.

This bill does not include any requirement for DEQ review and approval of the landfill gas collection system design. Part 115 currently includes only generalized guidance on the requirements for landfill gas collection systems, and these requirements are triggered only if methane gas is detected escaping the landfill at levels that exceed 25 percent of the lower explosive limit for methane at or beyond the facility property boundary. The WHMD recommends that the bill include a requirement for DEQ review and approval of the gas collection system design and/or that rules be promulgated under Part 115 that specify landfill gas collection system design requirements.

If Michigan's goal is to maximize energy production from organic materials (i.e., yard waste), then there are much more efficient means/ways for the landfills to achieve this (i.e., anaerobic digesters).

Steven E. Chester, Director
Department of Environmental Quality

WHMD