

Proposed New Landfill Gas Regulation

mwin Information Breakfast Session

Ontario Room, Town of Markham

October 31, 2007

Protecting our environment.



Ontario

Purpose of Session

- This information session is being held to answer questions about the EBR posting.
- Proposed new landfill gas regulations under the EPA were posted on August 9, 2007 for a 90-day comment period.
- EBR registry no. 010-0968
- The comment period ends November 7, 2007.
- All comments must be submitted in writing as set out in the EBR posting.

Landfill Gas

- The decomposition of organic waste (e.g. food waste) in landfills produces landfill gas which contains approximately 50% methane (CH₄) and 50% carbon dioxide (CO₂).
- Methane is a potent GHG as it has a global warming potential 21 times that of carbon dioxide.
- The quantity and rate of landfill gas emissions is site specific, depending on factors such as:
 - the amount of decomposable organic waste,
 - moisture content within the landfill, and
 - how long the waste has been in the landfill.

Landfill Gas

- Landfill methane emissions generally begin within a few years after disposal and continue at significant levels for up to about 50 years.
- Landfill gas controls involve installing a network of collection wells and directing the gas by fans to a flare for burning of the methane.
- Burning the methane reduces the global warming potential of the methane by about 95% as it is converted to carbon dioxide.
- Equipment can be added to produce electricity, or for other energy uses – for heating or industrial processes.

Overview of Proposed Regulation

- Ontario currently has mandatory landfill gas regulations.
- O. Reg. 232/98 under the EPA requires mandatory landfill gas air emission controls for new or expanding landfills larger than 3 million cu. m. total waste capacity.
- O. Reg. 232/98 came into effect in 1998 (see Appendix A).
- The August 9, 2007 proposed regulation amends the existing requirements essentially by:
 1. changing the landfill size trigger to 1.5 million cu. m., and
 2. applying the requirements to existing operating sites, in addition to new or expanding landfills.

Proposed Regulation

- All operating, new or expanding landfills larger than 1.5 million cu. m. would require landfill gas air emission controls.
- The new regulation applies to new or expanding landfills upon finalizing of the regulation.
- Plans for the gas controls would be required as part of the approvals process for the new/expanding landfills (i.e. under Part V (waste management) and Section 9 (air)).
- Operating landfills would be required to submit plans for the design and operation of gas controls to the Director by January 1, 2009.
- The certificates of approval for the operating landfills would be amended to include the gas controls as approved by the Director.

Proposed Regulation

- Operating landfills with gas controls already in place would be required to submit a report demonstrating that their existing controls are sufficient, and if not, plans to upgrade the controls.
- The actual date for implementation of the gas controls for a particular site would be as soon as practical, as approved by the Director taking into account site specific factors (e.g. site design, rate of fill).
- The regulation would allow a landfill owner to submit, if appropriate, a report demonstrating that the site will not generate significant quantities of landfill gas (e.g. due to the nature of the waste). The Director could then determine that landfill gas controls are not required.

EBR Comments

- Written comments should be directed to:

Larry Wilcox
Ministry of the Environment
Waste Management Policy Branch
135 St. Clair Ave. W., 7th Floor
Toronto, Ontario M4V 1P5

Phone: (416) 314-7876

- Comment deadline: November 7, 2007

Appendix A – O. Reg. 232/98

Atmospheric Emissions of Landfill Gas

15. (1) A person shall not establish a new landfilling site or increase the total waste disposal volume of an existing landfilling site unless a written report has been prepared respecting the design of facilities for the collection, and for the burning or use, of landfill gas generated by the site during site operation and following site closure.

(2) Subsection (1) applies only if a new landfilling site is being established with a total waste disposal volume of more than 3.0 million cubic metres or the total waste disposal volume of an existing landfilling site is being increased to more than 3.0 million cubic metres.

Appendix A – O. Reg. 232/98

Atmospheric Emissions of Landfill Gas – cont'd.

(3) Subsection (1) does not apply if a written report is prepared showing that, based on the characteristics of the site and the type of waste to be deposited, the nature and quantity of landfill gas generated at the site is not likely to be of significant concern.

(4) Subsection (1) does not apply to a landfilling site associated with forest products operations, such as the operations of a lumber mill, sawmill, pulp mill or similar facility, if the waste to be deposited at the site is produced by the forest products operations and is predominantly solid, non-hazardous process waste, such as woodwaste, effluent treatment solids, hog fired boiler ash, recycling process rejects, lime mud, grits or dregs. O. Reg. 232/98, s. 15.