**Section 811.311 Landfill Gas Management Systems**

a) The operator shall install a gas management system if any one of the following conditions are met:

1) A methane concentration greater than 50 percent of the lower explosive limit in air, is detected below the ground surface by a monitoring device or is detected by an ambient air monitor located at or beyond the property boundary or 30.5 meters (100 feet) from the edge of the unit, whichever is less, unless the operator can demonstrate that the detected methane concentration is not attributable to the facility;

2) Methane is detected at a concentration greater than 25 percent of the lower explosive limit in air in any building on or near the facility unless the operator can demonstrate that the detected methane concentration is not attributable to the facility;

3) Malodors caused by the unit are detected beyond the property boundary; or

4) Leachate is recycled in accordance with Section 811.309(e).

b) If methane gas levels exceed the limits specified in subsections (a)(1) or (a)(2), an owner or operator of a MSWLF unit shall:

1) Notify the Agency in writing, within two business days, of an observed exceedance; and

2) Implement the requirements of this Section to ensure the protection of human health.

c) Standards for Gas Venting System

1) Gas venting systems shall be utilized only as optional, temporary mitigation until the completion of an active system.

2) All materials shall be resistant to chemical reaction with the constituents of the gas.

3) The system shall be capable of venting all gas down to the water table or bottom of the liner, whichever is higher.

4) Gas venting systems shall be installed only outside the perimeter of the unit.

d) Standards for Gas Collection Systems

1) Gas collection systems may be installed either within the perimeter of the unit or outside the unit.

2) The operator shall design and operate the system so that the standards of subsections (a)(1), (a)(2), and (a)(3) will not be exceeded.

3) The gas collection system shall transport gas to a central point or points for processing for beneficial uses of disposal in accordance with the requirements of Section 811.312.

4) The gas collection system shall be designed to function for the entire design period. The design may include changes in the system to accommodate changing gas flow rates or compositions.

5) All materials and equipment used in construction of the system shall be rated by the manufacturer as safe for use in hazardous or explosive environments and shall be resistant to corrosion by constituents of the landfill gas.

6) The gas collection system shall be designed and constructed to withstand all landfill operating conditions, including settlement.

7) The gas collection system and all associated equipment including compressors, flares, monitoring installations, and manholes shall be considered part of the facility.

8) Provisions shall be made for collecting and draining gas condensate to a management system meeting the requirements of Section 811.309.

9) Under no circumstances shall the gas collection system compromise the integrity of the liner, leachate collection or cover systems.

10) The portion of the gas collection system, used to convey the gas collected from one or more units for processing and disposal shall be tested to be airtight to prevent the leaking of gas from the collection system or entry of air into the system.

11) The gas collection system shall be operated until the waste has stabilized enough to no longer produce methane in quantities that exceed the minimum allowable concentrations in subsections (a)(1), (a)(2), and (a)(3).

12) The gas collection system shall be equipped with a mechanical device, such as a compressor, capable of withdrawing gas, or be designed so that a mechanical device can be easily installed at a later time, if necessary, to meet the requirements of subsections (a)(1), (a)(2), and (a)(3).

BOARD NOTE: Subsection (b) is derived from 40 CFR 258.23(c)(1) (1992).

(Source: Amended in R93-10 at 18 Ill. Reg. 1308, effective January 13, 1994)