**Section 811.310 Landfill Gas Monitoring**

a) This Section applies to all units that dispose putrescible wastes.

b) Location and Design of Monitoring Wells

1) Gas monitoring devices must be placed at intervals and elevations within the waste to provide a representative sampling of the composition and buildup of gases within the unit.

2) Gas monitoring devices must be placed around the unit at locations and elevations capable of detecting migrating gas from the ground surface to the lowest elevation of the liner system or the top elevation of the groundwater, whichever is higher.

3) A predictive gas flow model may be utilized to determine the optimum placement of monitoring points required for making observations and tracing the movement of gas.

4) Gas monitoring devices must be constructed from materials that will not react with or be corroded by the landfill gas.

5) Gas monitoring devices must be designed and constructed to measure pressure and allow collection of a representative sample of gas.

6) Gas monitoring devices must be constructed and maintained to minimize gas leakage.

7) The gas monitoring system must not interfere with the operation of the liner, leachate collection system, or delay the construction of the final cover system.

8) At least three ambient air monitoring locations must be chosen and samples must be taken no higher than 0.025 meter (1 inch) above the ground and 30.49m (100 feet) downwind from the edge of the unit or at the property boundary, whichever is closer to the unit.

c) Monitoring Frequency

1) All gas monitoring devices, including the ambient air monitors must be operated to obtain samples on a monthly basis for the entire operating period and for a minimum of five years after closure.

2) After a minimum of five years after closure, monitoring frequency may be reduced to quarterly sampling intervals.

3) The sampling frequency may be reduced to yearly sampling intervals upon the installation and operation of a gas collection system equipped with a mechanical device such as a compressor to withdraw gas.

4) Monitoring must be continued for a minimum period of: 30 years after closure at MSWLF units, except as otherwise provided by subsections (c)(5) and (c)(6); five years after closure at landfills, other than MSWLF units, which are used exclusively for disposing of wastes generated at the site; or 15 years after closure at all other landfills regulated under this Part. Monitoring, beyond the minimum period, may be discontinued if the following conditions have been met for at least one year:

A) The concentration of methane is less than five percent of the lower explosive limit in air for four consecutive quarters at all monitoring points outside the unit; and

B) Monitoring points within the unit indicate that methane is no longer being produced in quantities that would result in migration from the unit and exceed the standards of subsection (a)(1).

5) The Agency may reduce the gas monitoring period at an MSWLF unit upon a demonstration by the owner or operator that the reduced period is sufficient to protect human health and environment.

6) The owner or operator of an MSWLF unit must petition the Board for an adjusted standard in accordance with Section 811.303, if the owner or operator seeks a reduction of the postclosure care monitoring period for all of the following requirements:

A) Inspection and maintenance (Section 811.111);

B) Leachate collection (Section 811.309);

C) Gas monitoring (Section 811.310); and

D) Groundwater monitoring (Section 811.319).

BOARD NOTE: Those segments of this subsection (c) that relate to MSWLF units are derived from 40 CFR 258.61 (2017).

d) Parameters to be Monitored

1) All below ground monitoring devices must be monitored for the following parameters at each sampling interval:

A) Methane;

B) Pressure;

C) Oxygen; and

D) Carbon dioxide.

2) Ambient air monitors must be sampled for methane only when the average wind velocity is less than eight kilometers (five miles) per hour at a minimum of three downwind locations 30.49 meters (100 feet) from the edge of the unit or the property boundary, whichever is closer to the unit.

3) All buildings within a facility must be monitored for methane by utilizing continuous detection devices located at likely points where methane might enter the building.

e) Any alternative frequencies for the monitoring requirement of subsection (c) for any owner or operator of an MSWLF that disposes of 20 tons (18 megagrams) of municipal solid waste per day or less, based on an annual average, must be established by an adjusted standard pursuant to Section 28.1 of the Act and Subpart D of 35 Ill. Adm. Code 104. Any alternative monitoring frequencies established under this subsection (e) must fulfill the following requirements:

1) They must consider the unique characteristics of small communities;

2) They must take into account climatic and hydrogeologic conditions; and

3) They must be protective of human health and the environment.

BOARD NOTE: This subsection (e) is derived from 40 CFR 258.23(e) (2017).

(Source: Amended at 42 Ill. Reg. 21330, effective November 19, 2018)