



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
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BOSTON, MASSACHUSETTS 02109-3912

Dated by Electronic Signature below

David Cotter, PE, Environmental Specialist
Covanta Haverhill, Inc.
100 Recovery Way
Haverhill, MA 01835

Re: Alternative Sampling Method under the Standard of Performance for Municipal Solid Waste Landfills at Ward Neck Hill Landfill, Haverhill, MA

Dear Mr. Cotter:

In a letter, dated February 12, 2021, Covanta requested an alternative sampling method for the Ward Neck Hill Landfill located in Haverhill, Massachusetts, which is subject to the Standard of Performance for Municipal Solid Waste Landfills (40 C.F.R. Part 60, Subpart WWW). Specifically, the letter sought EPA approval to sample non-methane organic compounds (NMOC) using Tier 2 methods as described in 40 C.F.R. §60.754(a)(3) and (5). Covanta indicated that samples will be collected from a common collection header pipe and alternatively from leachate cleanout risers in lieu of using sampling probes. Covanta made a similar request in August 2010.

Background

Covanta submitted to EPA a proposed NMOC alternative sampling plan to EPA. Covanta explains that there is no active gas collection system in phases XI, XII, XV, and XVI of the landfill. These phases contain a layer of municipal solid waste (MSW) at the bottom of the landfill that is seven to eight feet thick. On top of the MSW layer is an ash layer that varies from 20 to 150 feet in depth. Landfill gas (LFG) is only generated in the MSW layer of the waste, and the ash layer above the MSW impedes the upward movement of the landfill gas. As a result, Covanta has not installed any gas collection wells in these locations. Covanta indicates that it does not commonly detect LFG emissions and odors at the landfill surface above the ash-filled layers.

Covanta further explains that all phases of the landfill have been constructed with a leachate collection system installed above the liner. The leachate collection system piping is sloped to promote leachate flow from each side of the cell to the middle and from the high end of the cell towards the low point of the cell. Leachate cleanout pipe risers extend from the end of the perforated leachate collection pipe within the landfill waste, up the slope of the liner to the ground surface at the base of the landfill side slope. Covanta explains that in the areas without active gas collection, the leachate collection system has been demonstrated to function as a passive gas collection system. For example, Covanta indicates

that the leachate collection system piping in Phases XI, XII, XV and XVI has been observed, through field testing at cleanouts, to have high concentrations of LFG present (55-60 percent methane).

Sampling at Phases XI, XII XV, and XVI

Covanta proposes an alternative method for NMOC sampling by obtaining representative samples from the leachate collection system via leachate cleanouts in lieu of using Tier 2 sample probes. Covanta proposes to collect a total of 11 samples from the leachate cleanout risers in Phases XI, XII, XV and XVI in this way:

- Three samples from Phase XI;
- Three samples from Phase XII;
- Three samples from Phase XV; and
- One sample from Phase XVI.

EPA Determination

Based on the information submitted by Covanta in its proposed alternative sampling plan, EPA approves Covanta's alternative sampling method of collecting NMOC samples from leachate cleanout systems of Phases XI, XII, XV, and XVI of the landfill. This sampling methodology is being allowed on a site-specific basis due to the unique features of the landfill including the location and depth of the MSW, the design of the leachate collection system, and the field testing at the cleanouts.

The remaining sampling methodology at the landfill for determining site specific NMOC mass emission rate appears to conform with the Standards of Performance for Municipal Solid Waste Landfills, 40 C.F.R. §60.754(a)(3). Other than in Phases XI, XII, XV, and XVI, Covanta proposes to sample NMOC from common header pipes prior to condensate removal and gas conditioning.

Covanta has indicated that it failed to conduct sampling in the fall, as required, but anticipates being able to conduct the sampling analysis within six weeks of receiving EPA's approval of its alternative sampling plan.

If you have any questions regarding EPA's approval of Covanta's alternative sampling methodology, please contact Christine Sansevero from EPA at (617) 918-1699 or Sansevero.christine@epa.gov.

Sincerely,

**JAMES
CHOW**

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James Chow, Deputy Director
Enforcement and Compliance Division

Cc: Edward Braczyk, MassDEP
Andrew Sheppard, EPA - OAQPS