



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

November 18, 2021

Mr. Juene Franklin, PE
President
Franklin Engineers & Consultants, LLC
2734 Sunrise Boulevard, Suite 308
Pearland, Texas 77584

Dear Mr. Franklin:

The U.S. Environmental Protection Agency is providing this regulatory interpretation in response to your letter of request dated September 23, 2021, regarding the use of an alternative procedure for calculating the nonmethane organic compound (NMOC) emission rate at the Hopkins County Regional Landfill (HCRL) located in White Plains, Kentucky. Historically, the HCRL was subject to Title 40 Code of Regulations (CFR) Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills), and the EPA determined that HCRL's use of an alternative procedure for determining the NMOC emissions was acceptable for compliance purposes of Subpart WWW. On June 21, 2021, the EPA promulgated Title 40 CFR Part 62, Subpart OOO (Federal Plan Requirements for Municipal Solid Waste Landfills that commenced construction on or before July 17, 2014, and have not been modified or reconstructed since July 17, 2014). As a result, Subpart WWW no longer applies to the HCRL, only Subpart OOO. In your letter, you requested to continue using the equation that determines if a gas collection and control system (GCCS) can be capped, removed, or decommissioned to determine the NMOC emissions rate, in lieu of equations based on known or unknown actual year-to-year solid waste acceptance rates. The regulatory interpretation provided in this letter, addresses the provisions in effect by promulgation of Part 62, Subpart OOO.

Subpart OOO requires that owners and operators of landfills with a design capacity equal to or greater than 2.5 million megagram (Mg) and equal to or greater than 2.5 million cubic meters, calculate their facilities NMOC emission rates on an annual basis. Under Subpart OOO, owners and operators of landfills with calculated NMOC emission rates that are equal to, or greater than 34 Mg/year, are required to install, operate, and maintain a GCCS. Your letter requested approval to use an alternative NMOC emission rate calculation method pursuant to §62.16718(a)(5) for an area of HCRL where a GCCS is installed and operating. Based upon our review of your submittal, your request will be acceptable under conditions outlined in this letter.

In §62.16718, two equations for calculating NMOC emission rates are provided. The equation in §62.16718(a)(1)(i)(A) is for landfills that have known actual year-to-year solid waste acceptance rates, and the equation in §62.16718(a)(1)(ii)(A) is for landfills where the actual year-to-year solid waste acceptance information is not available. As an alternative to using either of these equations to calculate the NMOC emission rate for the HCRL, your letter requested an approval to use the equation promulgated at §62.16718(b). Under Subpart OOO, this equation is used for calculating NMOC

emission rates when determining whether a GCCS, installed to comply with Subpart OOO, can be capped, removed, or decommissioned.

Under the alternative you propose, the annual NMOC emission rate from the HCRL will be determined as follows:

1. Tier 2 site-specific NMOC concentration testing will be conducted as required under §62.16718(a)(3)(ii). During testing events, Tier 2 samples are collected at the flare station that is part of the landfill's existing GCCS; additionally, sampling is conducted before any gas moving, condensate removal, or treatment system equipment. A total of four samples are collected, one of which serves as a spare sample in case one of the other samples becomes unusable.
2. Landfill gas collected at the HCRL is burned in an onsite flare, and a calibrated mass flow meter continuously measures the amount of landfill gas sent to the flare. This mass flow meter will be used to determine the volume of landfill gas collected and burned at the HCRL on an annual basis.
3. The annual NMOC emission rate for the HCRL will be calculated using the equation in §62.16718(b). The inputs for the equation will be the NMOC concentration from the Tier 2 testing and the annual flow rate of the landfill gas measured at the flare inlet.

Your request to use the equation in §62.16718(b) as an alternative to the equations in §62.16718(a) is based upon the following factors:

1. Landfill rule implementation guidance issued by the EPA indicates that, if a landfill has an existing GCCS, the equation normally used for calculating NMOC emission rates to determine whether a GCCS can be removed, can also be used for determining whether a landfill's NMOC emission rate exceeds the threshold which triggers the requirement for installation of a GCCS. The guidance document which discussed this option is entitled *Municipal Solid Waste Landfill New Source Performance Standards and Emission Guidelines Questions and Answers*. This guidance was initially published in 1998 and was updated in 2002.
2. In a letter, dated November 18, 2015, the EPA Region 4 approved the use of the equation in §60.754(b) for calculating the NMOC emission rate for the portion of the HCRL where a non-regulatory gas collection system was installed. The equation in §60.754(b) is identical to the equation in §62.16718(b). The basis for this prior approval was two-fold: (1) Allowing the use of the equation was consistent with the EPA's 2002 guidance, and (2) NMOC emission rates using the alternative equation should be more accurate than those calculated using the equation that has the same format as the one in §62.16718(a). This is because landfill gas flow rates in the alternative equation are measured directly, rather than calculated using multiple parameters (*i.e.*, waste acceptance rates, waste age, and methane generation rates constants), which can cause errors in the calculated emission rate if accurate site-specific information is not available.

You have referenced, and enclosed with your request, a recent regulatory interpretation issued by Region 4, dated July 20, 2021, to the Morehead Landfill located in Morehead, Kentucky, which contains acceptable conditions for the HCRL and serves as the basis regarding your proposed methodology.

Based upon our review of your proposal, the EPA has determined that it will be acceptable under the following conditions:

1. The owner/operator of HCRL must maintain and calibrate the mass flow meter at the inlet to the flare station in accordance with manufacturer recommendations. Documentation regarding flow meter maintenance and calibration must be included with each annual emission rate report submitted to satisfy the reporting requirement in §62.16724(c).
2. The owner/operator of HCRL must continue the monitoring program to demonstrate that a negative pressure is maintained at each wellhead in the gas collection system. This demonstration shall be provided by conducting quarterly monitoring using procedures and corrective action provisions promulgated at §62.16720(a)(3).
3. The owner/operator of the HCRL must implement a monitoring program to demonstrate that the surface methane concentration at the facility is less than 500 parts per million by volume (ppmv). This demonstration shall be provided by conducting quarterly monitoring using procedures and corrective action provisions promulgated at §60.16720(c). Monitoring shall be conducted in accordance with §60.16717(d), which requires that the surface methane concentration be measured around the perimeter of the collection area, at 30-meter intervals across the landfill surface, and where visual observations indicate the potential for elevated landfill gas concentrations (*i.e.*, areas where distressed vegetation, cracks or seeps in the landfill cover, or cover penetrations are present).
4. Use of the equation in §62.16718(b) is acceptable for areas of the landfill under the influence of the existing gas collection system. Tier 2 sampling using probes must be conducted in accordance with procedures in §62.16718(a)(3) in any areas of the landfill not under the influence of the existing gas collection system. The NMOC emission rate for the area of the landfill not under the influence of the existing gas collection system must be calculated using area-specific Tier 2 results and the equations in §62.16718(a).
5. The total NMOC emission rate for the HCRL must be calculated as the sum of the emission rate in the portion of the landfill under the influence of the existing gas collection system and the emission rate in the portion of the landfill not under the influence of the existing gas collection system.

The landfill rule implementation guidance that the EPA updated in 2002 requires the presence of a properly designed and operated gas collection system as a prerequisite to calculating NMOC emission rates using an equation formatted like the one in §62.16718(b). The basis for the EPA's conditional approval of your proposal is that the equation in §62.16718(b) will yield more accurate results than the equations in §62.16718(a) if the gas collection system at the landfill is well designed and operated. In addition, approval to use the equation in §62.16718(b) is consistent with the previous guidance and determinations issued by the EPA. For the equation in §62.16718(b) to yield accurate results, an ongoing demonstration that the gas collection system is designed and operating properly is necessary.


Subpart OOO requires that NMOC emission rates be calculated annually for landfills whose emissions are below 34 Mg/year. Based upon this annual reporting requirement, the EPA determined that the quarterly monitoring specified as a condition for approval for your request is needed to provide

assurance that the gas collection at the HCRL is designed and operated in a manner that will prevent NMOC emission rates from being underestimated when using the equation in §62.16718(b).

The review of your regulatory interpretation request was coordinated with the EPA Region 4 Enforcement and Compliance Assurance Division, and the EPA's Office of Enforcement and Compliance Assurance and the Office of Air Quality Planning and Standards. If you have any questions about the response provided in this letter, please contact Mr. Tracy Watson of my staff at (404) 562-8998 or by email at watson.marion@epa.gov.

Sincerely,

**CAROLINE
FREEMAN**

 Digitally signed by CAROLINE
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Caroline Y. Freeman
Director
Air and Radiation Division

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