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

February 2, 2022

Mr. Jason Morgan, PE
Project Director
SCS Engineers, LLC
2520 Whitehall Park Drive, # 450
Charlotte, North Carolina 28273

Dear Mr. Morgan:

The U.S. Environmental Protection Agency is providing this regulatory interpretation (RI) in response to your November 29, 2021, letter regarding the removal of the gas collection and control system (GCCS) at the Palmetto Landfill (PL) located in Wellford, South Carolina. Historically, the PL was subject to Title 40 Code of Regulations (CFR) Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills) and was certified "closed" under the provisions 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 PL; instead, 40 CFR 62, Subpart OOO now applies. In addition to Subpart OOO, the PL is also regulated under the provisions of Title 40 CFR Part 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: MSW Landfills. In your letter, you requested confirmation from the EPA that the GCCS may be removed based on the emission rate results determined by emissions testing.

The EPA requested additional information from you on: December 7, 9, and 15, 2021 and January 7, 11, 12, 13, and 19, 2022. We received information from you on December 7, 10, and 15, 2021 and January 7, 11, 12, and 19, 2022. Based on our review of your submittal, and the additional information you provided, the EPA agrees that the GCCS may be removed, capped, or decommissioned. Details regarding the basis for our determination are provided in the remainder of this letter.

Background Information of the PL

The PL began receiving waste in January 1979. In June 1996, under the provisions of Subpart WWW, the PL reported non-methane organic compounds (NMOC) emissions greater than 50 megagrams (Mg) per year (Mg/Yr). As a result, under §60.752(b)(2)(ii), the PL was required to install a GCCS to control emissions of NMOC from the landfill. The PL installed the GCCS and completed the initial performance test on July 8, 1999. The PL has operated and maintained the GCCS since July 1999.

On September 2, 2016, the PL provided a notification to the South Carolina Department of Health and Environmental Control (SCDHEC) indicating that receipt of MSW at the landfill ended on September 1, 2016. The PL also submitted preliminary information related to its closure activities. On December 12, 2016, the PL provided supplemental information to the SCDHEC on its final closure activities. On February 2, 2017, the SCDHEC conducted a closure inspection of the PL. On March 24, 2017, after a review of the closure report and consideration of the inspection results, the SCDHEC certified the

closure of the landfill and issued a post closure permit (PERMIT #422401-1101), with an effective date of December 2, 2016.

Emissions Testing of the PL GCCS

On November 24, 2020, SCS Engineers submitted a GCCS removal testing protocol titled "Tier 2 NMOC Performance Test Plan" (Plan) to the SCDHEC and requested approval of the Plan. On December 2, 2020, the SCDHEC approved the Plan. On December 10, 2021, March 11, 2021, and June 14, 2021, SCS Engineers conducted testing. Results from the testing were submitted to the SCDHEC on January 5, 2021, April 2, 2021, and July 6, 2021, and the SCDHEC approved the results for compliance demonstration purposes on February 9, 2021, April 27, 2021, and July 29, 2021.

You have included the results of the testing with your submittal and demonstrated by §62.16718(b) Equation 3 calculations that the NMOC emission rate is less than 50 Mg/Yr for each testing event. The NMOC emission rates from the testing events are as follows:

Date	**NMOC Emission Rate (Mg/Yr)**
December 10, 2020	18.52
March 11, 2021	26.38
June 14, 2021	21.71

On July 27, 2021, SCS Engineers, acting on behalf of the PL, submitted a PL GCCS removal report to the SCDHEC. SCS Engineers cited §62.16711(g)(5) and noted that the equipment removal report was submitted under the provisions of Subpart WWW. However, Subpart OOO, became effective on June 21, 2021. As a result, the SCDHEC directed SCS Engineers to submit the GCCS removal report to the EPA, the administrator of Subpart OOO, to receive a RI related to the removal of the GCCS. The EPA received SCS Engineer's RI request on December 1, 2021.

Based on the information contained in your request, you propose to decommission the GCCS based on the following information:

1) The PL is a closed landfill and has not accepted waste since September 1, 2016.
2) A landfill closure report was submitted to the SCDHEC on September 2, 2016.
3) The PL has operated the GCCS more than 15 years.
4) The calculated NMOC emission rate is less than 50 Mg/Yr based on emission testing conducted on December 10, 2020, March 11, 2021, and June 14, 2021.

EPA's Review of Subparts OOO and AAAA

1) Subpart OOO

Under §62.16714(f), the GCCS at a landfill within the closed landfill subcategory may be capped, removed, or decommissioned if: (1) the GCCS has been in operation a minimum of 15 years; and (2) the landfill's calculated NMOC emission rate, using the procedures specified in §62.16718(b), is less than 50 Mg/Yr based on three successive test dates, where the test dates must be no less than 90 days apart, and no more than 180 days apart. Under §62.16730, the *closed landfill subcategory* includes closed landfills for which a closure report, as described in §62.16724(f), was submitted on or before September 27, 2017.

Testing flow rate and NMOC concentration results must be used in Equation 3 of §62.16718(b) for the purposes of determining when the system can be capped, removed, or decommissioned. The testing must be conducted at a common header pipe before the gas is sent to gas moving (e.g., compressor) or condensate removal equipment (e.g., condenser, knockout pot). The average NMOC concentration must be determined by EPA Method 25 or EPA Method 25C of Appendix A-7 of 40 CFR Part 60 or another method which has been approved by the Administrator (e.g., gas chromatography). The NMOC concentration result obtained by the test must be divided by six to convert from a carbon-basis NMOC (as carbon) to a hexane carbon-basis NMOC (as hexane). The flow rate of landfill gas must be determined using a gas flow measuring device calibrated according to the provisions of Section 10 of EPA Method 2E of Appendix A-1 of 40 CFR Part 60 or by another method which has been approved by the Administrator (e.g., compliance demonstration flowmeter). Within 60 days after the date of calculating the NMOC emission rate for purposes of determining when the system can be capped or removed, the owner or operator must submit the results according to §62.16724(j)(2).

Under §62.16716(a)(2), each owner/operator of an MSW landfill equipped with a GCCS must operate a collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for 2 years or more if closed or at final grade.

Under §62.16724(g), each owner or operator of a controlled closed landfill must submit an *equipment removal report* to the Administrator 30 days prior to the cessation of operation of the control equipment. The equipment removal report must contain: (1) a copy of the closure report; (2) a copy of the initial performance test report; and (3) dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 Mg NMOC/Yr, or greater. Under §62.16711(f), the owner or operator of a closed landfill is no longer subject to the requirement to maintain an operating permit under 40 CFR Parts 70 or 71 for the purposes of Subpart OOO if the landfill meets the conditions for control system removal specified in §62.16714(f).

2) Subpart AAAA

Under §63.1957(b), a GCCS may be capped, removed, or decommissioned if: (1) the landfill is a closed landfill and a closure report was submitted to the Administrator as provided in §63.1981(f); (2) the GCCS has been in operation a minimum of 15 years; and (3) the calculated NMOC emission rate at the landfill, following the procedures specified in §63.1959(c), is less than 50 Mg/yr on three successive test dates where the test dates must be no less than 90 days apart, and no more than 180 days apart. Under §63.1990, closed landfill means "a landfill in which solid waste is no longer being placed." The standards specified in §§ 63.1959(c) and 63.1958(a)(2) are equivalent to the standards of §§ 62.16718(b) and 62.16716(a)(2), respectively.

Under §63.1981(g), each owner or operator of a controlled landfill must submit an equipment removal report as provided in §60.757(e). Each owner or operator of a controlled landfill must submit an equipment removal report to the Administrator 30 days prior to removal or cessation of operation of the control equipment. Beginning no later than September 27, 2021, the equipment removal report must contain the following items: (1) a copy of the closure report submitted in accordance with §63.1981(f); (2) a copy of the initial performance test report demonstrating that the 15-year minimum control period has expired; and (3) dated copies of three successive NMOC

emission rate reports demonstrating that the landfill is no longer producing 50 Mg or greater of NMOC per year.

Under §63.1950, owners/operators are no longer required to comply with the requirements of Subpart AAAA when the landfill meets the collection and control system removal criteria in §63.1957(b).

EPA's Determination

Subparts OOO and AAAA specify standards which determine when a collection and control system may be capped, removed, or decommissioned. Based on the available information, the EPA agrees the GCCS may be capped, removed, or decommissioned. The EPA's RI is based on the following information:

1.) The NMOC emission rates, as determined by calculations using the procedures in §§ 62.16718(b) and 63.1959(c), and based on the results from the testing conducted on December 10, 2020, March 11, 2021, and June 14, 2021, are less than 50 Mg/Yr and meet the requirements for removing, capping, or decommissioning the GCCS at the *closed subcategory* landfill.
2.) A copy of the landfill closure report, landfill closure certification report, and initial performance test report for the GCCS was provided to the EPA.
3.) The landfill has operated the GCCS for approximately five years after the last receipt of waste at the landfill on September 1, 2016, greater than the minimum requirement of two years.

The review of your RI request was coordinated with the EPA's Region 4 Enforcement and Compliance Assurance Division and the EPA's Office of Enforcement and Compliance Assurance and EPA 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

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