



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

January 7, 2022

Mr. David Cooper, PE  
Vice President  
SCS Engineers, LLC  
3922 Coconut Palm Drive, Suite 102  
Tampa, Florida 33619

Dear Mr. Cooper:

On November 5, 2021, the Florida Department of Environmental Protection (FDEP) received your request, acting on behalf of the Miami-Dade County Department of Solid Waste Management, to continue using Alternate Monitoring Procedure (AMP) 20-AA-AP for low landfill gas production wells in the West Cell of the North Dade Landfill (NDL) in Miami, Florida. Historically, the NDL was subject to Title 40 Code of Regulations (CFR) Part 60, Subpart WWW, Standards of Performance for Municipal Solid Waste (MSW) Landfills, and the FDEP determined that NDL's use of AMP 20-AA-AP was acceptable for compliance purposes of Subpart WWW.

On June 21, 2021, the U.S. Environmental Protection Agency promulgated 40 CFR Part 62, Subpart OOO (Federal Plan Requirements for MSW 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 NDL, but rather Subpart OOO. Since the FDEP is not the delegated authority to respond to your request for the purposes of Subpart OOO, it is necessary for the EPA to respond to your request. In addition to Subpart OOO, the NDL is also regulated under the provisions of Title 40 CFR Part 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: MSW Landfills. To eliminate duplication of potential concurring efforts within our agencies related your request, the FDEP has requested that the EPA also respond for the purposes of Subpart AAAA. Based upon our review of your submission, your request is denied. Details regarding the basis for our determination are provided in the remainder of this letter.

### **Characteristics of the NDL**

The NDL consists of a 218-acre MSW landfill with a maximum design capacity of approximately 12.8 million tons of waste and is equipped with a gas collection and control system (GCCS). The 118-acre West Cell is closed and has a permitted height of 95 feet. The 100-acre East Cell is active and has a permitted height of 138 feet. The landfill is scheduled to operate until the year 2024. The facility has a design capacity of greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m<sup>3</sup>). The West Cell gas collection system is comprised of 77 gas extraction wells that are approximately equally spaced in a pattern of 7 rows and 11 columns. The matrix of wells is identified as wells A-001 through K-007 (A-001, A-002 . . . A-007 through . . . K-007).

## **NDL's AMPs Request**

Based on the information contained in your request, the NDL West Cell contains old waste and produces a small amount of landfill gas. Due to this circumstance, the NDL has found it difficult to operate the West Cell under negative pressure while maintaining compliance with the oxygen (O<sub>2</sub>) concentration standard of Subpart WWW. On average, less than 0.5 inches (inHg) of negative pressure is applied across wellheads of the West Cell. As a corrective action to control the intrusion of O<sub>2</sub> into the landfill gas, resulting in instances of O<sub>2</sub> concentrations in the landfill gas which are higher than 5 percent (%) O<sub>2</sub>, the NDL proposes to isolate the wellhead(s) from the GCCS by temporarily capping the wellhead(s). As a result of the isolation of the wellhead(s) from the GCCS, positive pressure develops in the cell, a deviation from the negative pressure requirement. You have provided monitoring data for wells contained in the West Cell which indicates instances of noncompliance with the negative pressure and O<sub>2</sub> concentration standards. You affirm that the West Cell may be controlled by the landfill's gas GCCS and was historically subject to the operational and monitoring requirements of 40 CFR Part 60 Subpart WWW and 40 CFR Part 63, Subpart AAAA.

Based on the information presented, you have requested to use the following alternative monitoring procedures.

1. For wells where the O<sub>2</sub> concentrations do not decline below 5% after more than one hour at a vacuum pressure of less than 0.5 inHg, the wells will be shut down until the O<sub>2</sub> concentration quality recovers below 5%.
2. Monthly monitoring of wellhead pressure and landfill gas O<sub>2</sub> concentration will be conducted on wells that are shut down; however, indications of positive wellhead pressure or O<sub>2</sub> concentrations greater than 5 % will not be a violation.
3. If monthly monitoring of the shut down wellhead indicates that pressure has built up in the well and the O<sub>2</sub> concentration exceeds 5%, the wellhead will be opened temporarily to relieve the pressure and then be shut down again until it is monitored the following month.
4. If the monthly monitoring indicates that the landfill gas O<sub>2</sub> concentration quality has improved (O<sub>2</sub> concentrations has dropped below 5%), the well will be brought back online until the O<sub>2</sub> concentration increases above 5%.
5. Quarterly surface monitoring will be conducted for wells that have been shut down. Standard remediation steps, including evaluating the need to return wells to full-time service, will be followed if an exceedance of the 500 parts-per-million by volume (ppmv) methane surface concentration limit is detected.

## **EPA's Review of Subparts OOO and AAAA Operating Limits and Monitoring Requirements**

### **1) Subpart OOO**

Under §62.16714(a), each owner or operator of an MSW landfill having a design capacity greater than or equal to 2.5 million Mg by mass and 2.5 million m<sup>3</sup> by volume that meets the following conditions must collect and control MSW landfill emissions: (1) the landfill has accepted waste at any time since November 8, 1987, or has additional design capacity available for future waste deposition, (2) the landfill commenced construction, reconstruction, or modification on or before July 17, 2014, (3) the landfill has an NMOC emission rate greater than or equal to 34 Mg per year

(Mg/yr) or Tier 4 surface emission monitoring shows a surface emission concentration of 500 ppmv methane or greater, and (4) the landfill is in the closed landfill subcategory and has an NMOC emission rate greater than or equal to 50 Mg/Yr. Under §62.16716, the owner or operator must operate each interior wellhead with a negative pressure and a landfill gas temperature less than 131 degrees Fahrenheit (°F). Under §62.16722, each owner or operator must monitor temperature, gauge pressure, and nitrogen or O<sub>2</sub> concentration of the landfill gas.

## **2) Subpart AAAAA**

Under §63.1935(a), you are subject to Subpart AAAAA if you own or operate a MSW landfill that has accepted waste since November 8, 1987, or has additional capacity for waste deposition and meets any one of the following three criteria: (1) the MSW landfill is a major source as defined in §63.2 of Subpart A, (2) the MSW landfill is collocated with a major source as defined in §63.2 of Subpart A, or (3) the MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup> and has estimated uncontrolled emissions equal to or greater than 50 Mg/yr NMOC as calculated according to §63.1959.

Under §63.1935(b), you are subject to this subpart if you own or operate an MSW landfill that has accepted waste since November 8, 1987, or has additional capacity for waste deposition, that includes a bioreactor, as defined in §63.1990, and that meets any one of the following criteria: (1) the MSW landfill is a major source as defined in §63.2 of Subpart A, (2) the MSW landfill is collocated with a major source as defined in §63.2 of Subpart A, or (3) the MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup> and that is not permanently closed as of January 16, 2003.

Under §63.1958, each owner or operator of an MSW landfill, equipped with a GCCS to comply with the provisions of §63.1957, must operate the collection system with negative pressure, and beginning no later than September 27, 2021, operate each interior wellhead in the collection system with a landfill gas temperature less than 145 °F.


### **EPA's Determination**

Subparts OOO and AAAAA includes monitoring requirements for O<sub>2</sub>, but neither subpart contains operating limits for O<sub>2</sub>. As a result, AMPs based on landfill gas O<sub>2</sub> concentration control are not necessary to comply with the provisions of these subparts and your AMP request is denied. If your consideration of this denial reveals other factors which may otherwise warrant an AMP request for your specific circumstances, you may represent those factors in a separate petition for the EPA's consideration.

The review of your AMPs request was coordinated with Region 4's 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](mailto:watson.marion@epa.gov).

Sincerely,

**CAROLINE  
FREEMAN**

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Caroline Y. Freeman  
Director  
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