



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

October 24, 2022

Mr. Matt Einsmann, PE  
Environmental Manager  
Republic Services  
5111 Chin Page Road  
Durham, North Carolina 27703

Dear Mr. Einsmann:

This letter is in response to your letter dated July 5, 2022, regarding the decommissioning of landfill gas (LFG) extraction well EW-76A at Republic Services of North Carolina's (Republic) East Carolina Regional Solid Waste Landfill (ECRSWL) located in Aulander, North Carolina. The landfill is subject to Title 40 CFR Part 62, Subpart OOO (Federal Plan Requirements for Municipal Solid Waste (MSW) Landfills that commenced construction on or before July 17, 2014, and have not been modified or reconstructed since July 17, 2014) (Federal Plan). ECRSWL is also subject to Title 40 CFR Part 63, Subpart AAAA, National Emission Standards for Hazardous Air Pollutants: MSW Landfills.

On June 21, 2021, the U.S. Environmental Protection Agency promulgated the Federal Plan. In the absence of an approved state plan implementing Title 40 CFR Part 60, Subpart Cf, Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, or an approval transferring delegation of authority to a state to administer the Federal Plan, the EPA is required to act as the Administrator of the Federal Plan. To avoid duplicative efforts for a determination related to a review under Subpart AAAA, the North Carolina's Division of Air Quality has asked the EPA to provide a determination for Subpart AAAA on its behalf.

Based on a review of your submittal and additional information you provided, the EPA agrees that EW-76A may be decommissioned. Details regarding the basis for our determination are provided in the remainder of this letter.

**Background Information of ECRSWL and EW-76A**

ECRSWL is a municipal solid waste landfill owned by Republic that receives MSW, construction and demolition debris, and non-hazardous special wastes. The site is located at 1922 Republican Road in Bertie County, approximately 7.5 miles northwest of Windsor, North Carolina, near the community of Aulander. The permitted facility boundary consists of approximately 663 acres. The landfill was permitted to begin operation in 1993 and is permitted for a volumetric disposal capacity of approximately 23 million cubic yards. The landfill has a design capacity of approximately 5.9 million Mg. The facility has approximately 120 wells, 18 cleanouts, three manholes, five photovoltaic (PV) wells, and 18 gas well-water pumps. Phase 5 of construction allowed ECRSWL to

construct/operate Cell 13. The collection system, operating under a negative pressure from two blowers located near the flares, allows gas to migrate to two flares where it is combusted. Underneath the waste, there is a 60-mil plastic liner that allows leachate to drain to a collection point where it is pumped to leachate storage tanks near the flares. The leachate is shipped offsite for treatment and is not circulated in the landfill.

LFG extraction component EW-76A is a vertical well located in Cell 13 of ECRSWL. EW-76A was installed in October 2021 with 58 feet of perforated pipe and complied with the operational requirements of Subpart OOO. Beginning in March 2022, well monitoring data indicated operational performance issues when compared to historical data observed at the landfill (*e.g.*, flow rate < 10 standard cubic feet per minute, etc.). ECRSWL engaged in remediation actions to restore the well to functional operation, including implementation of inspections and adjustments to the wellhead, enhanced monitoring of well depth and liquid levels, and sampling port revisions. ECRSWL discovered EW-76A's subsurface perforated pipe was crimped at a level of 15 feet below surface and determined that under this condition, the installation an extraction pump would be infeasible. Therefore, Republic asserts EW-76A is damaged beyond repair. You have included surface emission monitoring (SEM) data for the area serviced by EW-76A which indicates compliance with the SEM standard. You have certified, under your professional engineering seal, that wells adjacent to EW-76A provide sufficient overlap coverage of the area serviced by EW-76A, including EQ-76A itself, and provided documentation to support that certification.

## **EPA's Review of Relevant Standards for Subparts OOO and AAAA**

### **1) Subpart OOO**

Under 40 CFR § 62.16711(a), the designated facility to which Subpart OOO applies is each municipal solid waste landfill in each state, protectorate, and portion of Indian country that commenced construction, reconstruction, or modification on or before July 17, 2014, or has accepted waste at any time since November 8, 1987, or the landfill has additional capacity for future waste deposition.

Under 40 CFR § 62.16714(a)(3), owners or operators of a MSW landfill having a design capacity greater than or equal to 2.5 million megagrams by mass and 2.5 million cubic meters by volume must collect and control MSW landfill emissions at each MSW landfill that has an NMOC emission rate greater than or equal to 34 megagrams per year.

Under 40 CFR § 62.16728(a)(1), owners or operators must site active collection wells at a sufficient density throughout all gas producing areas. The collection devices within the interior must achieve comprehensive control of surface gas emissions. The comprehensive control plan must be certified under the seal of a professional engineer. Under 40 CFR § 62.16728(a)(3), the determination for placement of gas collection devices must ensure control of all gas producing areas, except for areas of the landfill which are segregated for placement of asbestos waste or nondegradable waste material.

Under 40 CFR § 62.16720(c)(1), after installation and startup of a gas collection system, owners or operators must monitor surface concentrations of methane along the entire perimeter of the

collection area and along a pattern that traverses the landfill at 30-meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the instrumentation specifications and procedures specified in 40 CFR § 62.16720(d). Under 40 CFR § 62.16720(c)(4), any reading of 500 ppm or more above background at any location must be recorded as a monitored exceedance and the actions specified in 40 CFR § 62.16720(c)(4)(i-v) must be taken.

## **2) Subpart AAAA**

Under 40 CFR § 63.1935(a), owners or operators of an MSW landfill are subject to Subpart AAAA if the landfill has accepted waste since November 8, 1987, or has additional capacity for waste, and is a major source as defined in 40 CFR § 63.2 of subpart A, or is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m<sup>3</sup>) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to 40 CFR § 63.1959.

Under 40 CFR § 63.1935(b), owners or operators are subject to Subpart AAAA if they 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 is a major source as defined in § 63.2 of subpart A, or 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 40 CFR § 63.1959(b)(2), each owner or operator of an affected source having a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup> must submit a collection and control system design plan prepared by a professional engineer and install and start up the collection and control system to capture the gas generated within the landfill within 30 months after the first annual report in which the NMOC emission rate equals or exceeds 50 Mg/yr, excepting certain allowable procedures to act otherwise.

Under 40 CFR § 63.1962(a)(1), owners or operators must site active collection wells at a sufficient density throughout all gas producing areas. The collection devices within the interior must achieve comprehensive control of surface gas emissions. The comprehensive control plan must be certified under the seal of a professional engineer. Under 40 CFR § 63.1962(a)(3), the determination for placement of gas collection devices must ensure control of all gas producing areas, except for areas of the landfill which are segregated for placement of asbestos waste or nondegradable waste material.

Under 40 CFR § 63.1960(c)(1), after installation and startup of a gas collection system, owners or operators must monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the instrumentation specifications and procedures specified in 40 CFR § 63.1960(d). Under 40 CFR § 63.1960(c)(4), any reading of 500 ppm or more above background at any location must be recorded as a monitored exceedance and the actions specified in 40 CFR § 63.1960(c)(4)(i-v) must be taken.

## **EPA's Determination**


Subparts OOO and AAAA specify siting standards for active gas collection wells and require comprehensive control of surface gas emissions after installation of a gas collection system. Based on the available information, the EPA agrees LFG extraction well EW-76A can be decommissioned. The EPA's determination is based on the following information:

- 1.) Republic has certified, under the seal of a professional engineer, that the adjacent wells surrounding EW-76A provides overlap coverage of the area serviced by EW-76A, including EW-76A itself. Republic has provided a drawing to support the certification.

This approval is based upon prior consultation with our Office of Air Quality Planning and Standards and our Office of Enforcement and Compliance Assurance and is consistent with similar approvals issued by our office. 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,

**ANTHONY  
TONEY**

 Digitally signed by ANTHONY  
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Date: 2022.10.25 10:32:45 -04'00'

Caroline Y. Freeman  
Director  
Air and Radiation Division

cc: Steve Hall, NCDAQ  
Maria Malave, EPA OECA  
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