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U.S. Landfill Protocol Project Data Report

The Project Data Report (PDR) Template must be completed for each verification period. This template is only intended as a guide and provides the minimum required information to be reported. This template is designed for use with the U.S. Landfill Protocol V6.0 (US LP). The project developer has the option to include additional information at their discretion.

Please note that this document will be made publicly available once the project has registered credits the verification cycle. If there is proprietary information, please provide a redacted version for publication and a non-redacted version for internal review. Please contact the Reserve to discuss what information may be allowed to be redacted.

Account Holder	New River Resource Authority
Project ID and Name	CAR 560 - New Ricer Landfill Gas Methane Destruction Project
Cooperative/Aggregate ID (if applicable)	
Current Reporting Period Dates	January 1 through December 31, 2025
Protocol Version	U.S. Landfill V6.0
Claimed CRTs by Vintage	51,433
Date Submitted	8/17/26

1 Introduction

Provide a general description of the project, including location, baseline scenario, project activity, etc.

The project is comprised of the collection and destruction of the landfill gas (LFG) at the New River Resource Authority (NRRRA) Regional Landfill in Dublin, Virginia. Methane is destroyed via thermal oxidation at the utility flare station or as fuel in the internal combustion engines at an electrical generation facility.

The initial 10-year crediting period began with an official project start date of January 14, 2008 and credits were last issued through December 11, 2017. NRRRA became ineligible to participate with CAR under LPRP version 4.0, but was able to re-registering of the Facility with CAR for its second crediting period under LPRP version 5.0. Re-registration of the project was confirmed via the CAR online portal on October 19, 2020 for the timeframe beginning January 14, 2018 through January 13, 2028. For this reporting period, NRRRA is electing to claim GHG Emissions Reductions per the most recent version of the LPRP, version 6.0.

The Regional Landfill (Landfill or Facility) is owned and operated by the NRRRA, a solid waste planning unit of municipal governments established under the Virginia Solid Waste Planning and Recycling Regulations (9VAC20-130-92). The Facility consists of approximately 552 acres of which 350 acres have been designated for landfilling purposes. The Regional Landfill is permitted to operate under Virginia Department of Environmental Quality (VDEQ) Solid Waste Management Permit No. 548, Title V Air Operating Permit No. 21397, and Virginia Pollutant Discharge Elimination System General Stormwater Industrial Discharge Permit No. 051283. This site is permitted to receive municipal solid waste (MSW), construction and demolition (C&D) debris, and other non-hazardous wastes in six disposal areas A, B, C, D, E, and F which cover approximately 99 acres and have capacity of 16,156,338 cubic yards.

The Regional Landfill is an active waste disposal unit and commenced operations in May 1997. Areas A, B, C, and D comprise the current, active landfill area. Areas E and F comprise about 32 acres of future fill area. To date, the operations in Area A, B, C, and D do not satisfy the EPA's definition of a bioreactor as stipulated in 40 CFR 63 Subpart AAAA, and therefore the landfill gas collection and control system (LFGCCS) remains voluntary. LFG is extracted from the landfill via a network of extraction wells. Well depths range from 27 to 80 feet and average approximately 52 feet. A single 1,250 cfm VFD-controlled blower, and a 1,250-cfm utility flare collects and combusts the LFG collected from the landfill. A landfill gas-to-energy (LFGE) project commenced commercial operations in January 2015. This project diverts a portion of the LFG recovered at the site to fuel an electrical generation facility (power plant). The power plant is owned and operated by Archaea Energy (Archaea, may also be referred to as Ingenco). The VDEQ issued a separate Stationary Source Air Permit to Ingenco on March 29, 2013 (Permit No. 21548).

2 Project Definition

a Project Definition

Provide information on whether the project is an expansion of an existing landfill project or is being submitted as a new project, the type of destruction device (e.g. utility flares, enclosed flares, engines, turbines, microturbines, boilers, pipelines, leachate evaporators, kilns, sludge

dryers, burners, furnaces, or fuel cells), default or site-specific destruction efficiency values, and whether landfill gas is destroyed onsite or transported for offsite use. Supporting documentation must be provided to the verifier during each verification cycle, which may include project diagrams, LFG flow data, methane flow data, facility records, etc.

This project is a new project in its second crediting period, however the calculation of carbon credits for this project does account for a non-qualifying destruction device. The Regional Landfill operated one LSC passive vent flare installed on a leachate cleanout for the purposes of odor control. LFG is destroyed via a utility flare owned and operated by NRRRA, or at the on-site electrical generation facility owned and operated by Archaea Energy, comprised of 12 engine generator sets (gensets), each with a nameplate capacity of approximately 350 kW.

A project diagram, LFG flow data, methane flow data, and other related records have been submitted to the verifier for the January 1 - December 31, 2025 verification period under separate cover.

b Project Developer

List the entities which have any amount of legal control over the project boundary and identify the mechanism through which the Account Holder has legal authority to implement the project. In addition, please state which entity will be designated as the project developer and will sign the Attestation of Title. If the Account Holder is not the entity listed on the facility's operating permit, explain how they obtain the right to operate the project on the facility's behalf.

NRRRA (the account holder) is the owner and operator of the landfill and gas collection system up to the utility flare. While Archaea owns and operates the on-site electrical generation facility. NRRRA oversees the data collection and review for this project.

3 Project Eligibility

a Project Location

Provide the project location.

The Regional Landfill project is located at 7100 Cloyd's Mountain Road, Dublin, Virginia in the United States.

b Project Start Date

Briefly describe the documentation used to demonstrate the date at which the GCCS system became operational, i.e., the date landfill gas was first destroyed in a project destruction device. Provide a description of the start-up testing period (destruction device, timeline, etc.), if applicable. Include what documentation will be provided to the verification body to demonstrate the commencement of methane destruction.

The NRRRA LFGCCS commenced operation on January 14, 2008.

c Project Crediting Period

State the project's crediting period as defined in Section 3.2 of the Protocol.

January 14, 2018 to January 13, 2028

d Additionality

i Performance Standard Test

Check the box below and provide a brief description of how the landfill gas destruction project meets the performance standard test as outlined in Section 3.4.1 of the protocol.

- ☐ Installation of a landfill gas collection and a new qualifying destruction device at an eligible landfill where landfill gas has never been collected and destroyed prior to the start date.
- ☐ Installation of a new qualifying destruction device at an eligible landfill where landfill gas is currently collected and vented, but has never been destroyed in any manner prior to the start date.
- ☒ Installation of a new qualifying destruction device at an eligible landfill where landfill gas was collected and destroyed at any time prior to the project start date using:
 - ☒ A non-qualifying destruction device (e.g., passive flare)
 - ☐ A destruction device that is not otherwise eligible under the protocol
- ☐ Installation of a new gas collection system on a physically-distinct cell (or cells) where neither gas collection nor destruction has previously occurred.

Description: NRRRA understands that the one formerly installed passive flare that was in operation before the Facility's initial crediting period meets the definition of a non qualifying destruction device as described in the Protocol.

ii Limits on Credit Stacking

Disclose if the project participates in carbon or other types of mitigation project types outside of the Reserve. If so, include a brief description of the project activity, the Registry in which the project is listed, and how the two projects do not result in double counting. Confirm that the Reserve and the other registry are aware of and provided approval for credit stacking. If no project stacking / credit stacking is occurring, state, "Not applicable."

Not applicable.

iii Legal Requirement Test

Attest that the project activities are not legally required. Identify any federal, provincial, or local regulations or legally binding mandates that are relevant to the project. State whether the project is subject to NSPS regulations and provide information regarding recent NMOC emission rate testing. Confirm that the landfill has not exceeded the NMOC threshold or provide the date at which the landfill is legally required to implement the GCCS.

The Regional Landfill's design capacity exceeds the mass and volume design capacity criteria of the MSW Landfill New Source Performance Standards (NSPS) as codified in Title 40 of the Code of Federal Regulations (CFR) Part 60, Subpart XXX, and the EG rule under 40 CFR Part 60, Subpart Cf, which are 2.5 million megagrams (Mg) and 2.5 million cubic meters, respectively. Consequently, it is required to operate under a Title V Air Operating Permit. The Regional Landfill's current Title V Operating Permit was issued on October 27, 2023, and is effective until December 16, 2028. The Tier 2 site-specific non-methane organic compounds

(NMOC) concentration was most recently measured during field sampling events conducted on March 30-31, 2016, and March 23, 2021. The most recent Tier 2 NMOC Emission Rate Report for the Landfill, presenting the Tier 2 NMOC sampling, analysis, and revised NMOC emission estimates, was prepared by SCS Engineers and submitted to VDEQ and the USEPA on April 21, 2021. Because the 2021 NMOC emission rate, 24.9 Mg/yr, is below the regulatory threshold of 34 Mg/yr, the Landfill's LFG collection and control system is not required to comply with the provisions of 40 CFR 60.1959(b)(2)(ii) at this time. NRRRA is required to conduct the next Tier 2 NMOC analysis in 2026.

e Social and Environmental Safeguards

i Social Safeguards

Confirm below that the project is in material compliance with all labor and safety laws for the verification period.

Confirmed.

ii Environmental Safeguards

Confirm below that the project was in material compliance with all environmental regulations during the reporting period, and how the project is designed and implemented in such a way to mitigate potential releases of pollutants that may cause degradation of the quality of soil, air, and surface and groundwater. Provide a brief description of any environmental benefits or harms that have resulted from the project.

The project was in material compliance with all environmental regulations during this reporting period. The gas collection system is designed with automated valves to close when the system is shut down and/or the flare is unable to combust LFG, preventing the collected gas from escaping into the atmosphere. Additionally, project staff receive automated alarms when the gas collection system is shut down so they can respond ASAP. Because no LFG collection system is required at this facility at all, all LFG collected and destroyed by this project is a net benefit to the environment. Additionally, the power generated by the Archaea facility adds renewable energy to the power grid.

f Regulatory Compliance

Provide the national, provincial, and/or local regulatory agencies with jurisdiction over the project boundary. Disclose any instances of non-compliance during the reporting period. Describe how the project will monitor for compliance during future reporting periods.

Pulaski County, VDEQ, and EPA, have regulatory jurisdiction over the Landfill. A notice of violation was received from Pulaski County on January 15, 2025, for exceeding ammonia nitrogen effluent limitations, automatic resampling, and special monitoring requirements in the landfill leachate liquids sent to the County's WWTP. The ammonia nitrogen level was addressed by increasing aeration and ventilation to the leachate tank. Sampling on January 17, 2025 indicated compliance with the ammonia nitrogen effluent limitations. The special monitoring requirements were addressed through a meeting and retraining session for Operations Assistances responsible for collection and documentation of samples. The landfill and gas collection system are owned by NRRRA, and therefore compliance reporting and inspections by regulatory bodies directly involve them. NRRRA is also committed to reviewing the compliance status of the separate air permit held by Archaea for the power generation facility each reporting period.

4 GHG Assessment Boundary

a GHG Assessment Boundary

The table below includes only the SSRs that are included in the project quantification. For all SSRs considered in the GHG Assessment Boundary (included and excluded GHGs and their justification) refer to Table 4.1 in the Protocol.

SSR	Source Description	Gas	Baseline (B) or Project (P)	Confirm each SSR is Included
4	Emissions from Waste Breakdown in Landfill	CH ₄	B,P	☒
5	Emissions from Gas Collection System	CO ₂	P	☒
6	Emissions from Supplemental Fuel	CO ₂ , CH ₄	P	☒
7	Emissions from Project LFG Boiler Destruction	CH ₄	P	☐
	Emissions from Baseline LFG Boiler Destruction	CH ₄	B	☐
8	Emissions from Project LFG Electricity Generation	CH ₄	P	☒
	Emissions from Baseline LFG Electricity Generation	CH ₄	B	☐
9	Emissions from Project LFG Flare Destruction	CH ₄	P	☒
	Emissions from Baseline LFG Flare Destruction	CH ₄	B	☐
10	Emissions from Upgrade of LFG	CO ₂	B,P	☐
11	Emissions from Project LFG Pipeline or other NG end-use	CH ₄	P	☐
	Emissions from Baseline LFG Pipeline or other NG end-use	CH ₄	B	☐

5 Quantifying GHG Emission Reductions

a Quantifying Baseline Emissions

i Summary of Baseline Quantification

Provide the total methane destroyed by the GCCS, factor for the oxidation of methane by soil bacteria, discount factor to account for modeling uncertainties, and adjustment factor to account for baseline LFG destruction device in the verification period, as calculated in the Protocol.

Vintage: 2025	Vintage:
Total methane destroyed: 2,849 tCH ₄	Total methane destroyed: tCH ₄
Oxidation factor by soil bacteria: 0.1	Oxidation factor by soil bacteria:
Monitoring uncertainties discount factor: 0.1	Monitoring uncertainties discount factor:
Adjustment factor for baseline LFG destruction device: 14,033 tCO ₂ e	Adjustment factor for baseline LFG destruction device:
Baseline Emissions: 51,433 tCO ₂ e	Baseline Emissions: tCO ₂ e

b Quantifying Project Emissions

i Site-Specific Destruction Efficiency

Provide the name of the state or local agency accredited service provider utilized to conduct the site-specific destruction efficiency testing, as well as the date the test was conducted and the destruction efficiency used for quantification.

U.S. Landfill Project Protocol V6.0 default destruction efficiency for open flares, 0.96, was used for quantification.

ii Summary of Project Emissions

Provide the total carbon dioxide emissions from the destruction of fossil fuel, total carbon dioxide emissions from the consumption of electricity from the grid, and the total quantity of emissions from supplemental natural gas in the verification period, as calculated in the Protocol.

Vintage: 2025	Vintage:
Emissions from fossil fuel use: 511.7 tCO ₂	Emissions from fossil fuel use: tCO ₂
Emissions from electricity use: 43.5 tCO ₂	Emissions from electricity use: tCO ₂
Emissions from supplemental natural gas: tCO ₂	Emissions from supplemental natural gas: tCO ₂
Project Emissions: 555.2 tCO ₂ e	Project Emissions: tCO ₂ e

c Final CRT Summary

Summarize the final result for determining the net GHG Reductions by vintage.

Vintage: 2025	Vintage:
Baseline Emissions: 51,987.8 tCO ₂ e	Baseline Emissions: tCO ₂ e
Project Emissions: 555.2 tCO ₂ e	Project Emissions: tCO ₂ e
Total GHG Emission Reductions/Removals: 51,433 tCO ₂ e	Total GHG Emission Reductions/Removals: tCO ₂ e

6 Project Monitoring

Check the boxes below and attest that project monitoring has occurred according to the Protocol. If requirements were not met, please list the date of variance request and fill out Section 7.

Have all monitoring and QA/QC requirements been met? ☒ Yes ☐ No

Have all field checks and calibrations been performed by a third-party? ☒ Yes ☐ No

Date of Variance Request, if applicable:

7 Variance Request

If a variance was requested during the reporting period, provide a brief description of the rule/requirement in the protocol in question, the conditions of the determination, and the date of the variance request and determination.

Date of Variance Request:

Protocol Section and Rule/Requirement:

Description of how the project did not meet the protocol requirement above:

Date Reserve Issued Determination:

Variance Conditions:

8 Project Documentation

The following documents are required to be submitted for project registration. In cases where there is proprietary information, please provide unredacted and redacted versions. If additional documents were submitted, please include the document title and its associated file name.

Document	File Name
Project Diagram	2020 NRRALFGCH4 Destruction Project System Diagram.pdf
Attestation of Title	Signed_2025 attestation of title.pdf
Attestation of Voluntary Implementation	Signed_2025 attestation of voluntary implementation.pdf
Attestation of Regulatory Compliance	Signed_2025 attestation of reg compliance.pdf
Monitoring Plan	revised GHG Monitoring Plan_Protocol_2025_reduced.pdf
Project Contributions to the U.N. Sustainable Development Goals Report Tool (if applicable)	SDG-Reporting-Tool-v2.0-1.pdf
Project Data Report (this document)	U.S. Landfill-PDR-1.pdf
List of Findings	CAR_NRRALNRGDP_FindingsPresentationWbk_V1<050225.xlsx
Variance Request (if applicable)	
