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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	3Degrees Group, Inc.
Project ID and Name	CAR635 Hancock County Landfill Gas Collection Project
Cooperative/Aggregate ID (if applicable)	
Current Reporting Period Dates	6/29/2024-12/31/2024
Protocol Version	U.S. Landfill V6.0
Claimed CRTs by Vintage	2024: 53,842
Date Submitted	1/7/2026

1 Introduction

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

The Hancock County Landfill Gas Collection Project (Project ID: CAR635) is a project that captures methane gas from a non-NSPS municipal solid waste facility and destroys the gas in engines and an open flare. The project is located on the Hancock County Landfill at 10400 Township Road 107 in Findlay, Ohio. The Project registered with the Climate Action Reserve (denoted as “the Reserve” or CAR hereafter) for emission reductions from the first crediting period from June 29, 2010 through June 28, 2020. The Project is now in its second crediting period that spans June 29, 2020 through June 28, 2030. The Project monitoring procedures and emission reduction calculations are all performed in accordance with CAR’s Landfill Project Reporting Protocol version 6.0 (hereafter referred to as “the Protocol”).

Prior to the project start, there was no landfill gas collection system, and all gas was vented to the atmosphere.

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.

The Hancock County Landfill opened in 1969 using the cut and cover method for placing waste. The original footprint covered approximately 52 acres and is presently in the process of being “closed” by construction of a Vertical Expansion. The completion of the Vertical Expansion is expected in 8 to 10 years. At that time waste placement will move to an area that is currently used for material called the Lateral Expansion, which is approved for use subject to placement of proper geocomposite liners and should provide an additional 75 years of capacity.

In 2009 the landfill voluntarily proposed to the State of Ohio Environmental Protection Agency (Ohio EPA) the installation of an active gas collection system with an open flare. In November 2009, Ohio EPA authorized this installation by issuing a Permit-to-Install (Attachment 1). Installation of the wells began in February 2010 and landfill’s open flare came online on June 29, 2010, initiating the project activity. An enclosed flare was added to the project skid on January 31, 2012 for experimental purposes and decommissioned in July 2014 (see email confirming enclosed flare removal, Attachment 2).

In 2013, Granger Electric (who was purchased by Energy Developments in August 2017) proposed to the Ohio EPA the installation of a landfill gas to electricity generation plant. In August 2013, Ohio EPA authorized this installation by issuing a Permit-to-Install (Attachment 3). In September 2014, the four engines became operational and, from that point forward, landfill gas is primarily used to generate electricity, which is sold to Energy Developments. The open flare has since been relegated to backup use only. The landfill gas is destroyed onsite.

In all calculations, the project uses the default efficiency value of 0.96 for the open flare, and the default efficiency value of 0.936 for the lean-burn internal combustion engine.

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.

3Degrees Group, Inc. ("3Degrees") owns full title to any Climate Reserve Tonnes (CRTs) issued at the Hancock County Landfill for this reporting period. Hancock County first assigns the emission reduction credits to Granger Energy & Electric (see agreement in Attachment 6) and they are subsequently sold to 3Degrees (Attachment 7). In August 2017, Granger Energy & Electric was purchased by Energy Developments ("EDL"), and has adopted their legal name (Attachment 8). The Attestation of Title is available for download on the Reserve's online software.

3 Project Eligibility

a Project Location

Provide the project location.

The project is located on the property of the Hancock County Landfill at 10400 Township Road 107 in Findlay, Ohio.

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 Project has been registered under the Climate Action Reserve with a start date of June 29, 2010, the day the flare became operational. This date is supported by the project's Air Pollution Permit-to-Install an active gas collection system and flare (Attachment 1), dated 11/17/09. The sales agreement between then Granger and Shaw for the purchase of the flare system is dated 1/20/10 (Attachment 4), and the date on the Flare nameplate shows a date of April 2010 (Attachment 5). Each of these documents corroborates the project flare start date of operation on 6/29/2010.

c Project Crediting Period

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

June 29, 2020 to June 28, 2030

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: Prior to the project start, there was no landfill gas collection system, and all gas was vented to the atmosphere. The project consists of installation of a new landfill gas collection system and qualifying destruction device (open flare and engines).

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 Hancock County Sanitation Landfill is not required under the federal regulations to install a gas collection and control system. In November 2009, the Ohio Environmental Protection Agency issued an Air Pollution Permit-to-Install (Attachment 1) to the landfill, which granted Hancock the permission to install the gas collection and control system and flare in a voluntary fashion.

The landfill is subject to the New Source Performance Standards (NSPS) for MSW Landfills under 40 CFR 60 Subpart XXX, and conducts Tier II testing. The latest Tier II testing was

performed in June 2023, with the highest estimated NMOC level being 25.7 MG/year, under the regulatory limit (Attachment 11). Hancock County also has a permit to discharge under their NSPS permit, included as Attachment 12, with no mention of requirements for the landfill to install a gas collection system.

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.

The project is in material compliance with all labor and safety laws for this verification period. There are no enforcement actions listed on the OSHA website for EDL or for the Hancock County Landfill. More details have been provided in the Environmental and Social Safeguards Assessment Form.

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.

There are no local environmental regulations for landfills through the township, so the Hancock County Sanitary Landfill is responsible for compliance on the state level (Ohio EPA). In order to comply with state regulations regarding air contaminant sources, the landfill has obtained from the Ohio EPA a Title V Permit (Attachments 13). The landfill has also obtained a Solid Waste Facility License from Ohio EPA in order to operate as a Municipal Solid Waste Landfill (Attachment 14). Neither of these documents mentions a requirement for the landfill to install a gas collection system. Hancock County also received a Permit to Install from the Ohio EPA in July 2018 which approved a lateral expansion of the landfill (Attachment 15).

Energy Developments similarly is regulated on the state level for the engine plant. Energy Developments (operating as Granger at the time) was issued a Permit-to-Install in August 2013 (Attachment 3), and operated under this until commencing engine operation on August 21, 2014. After engine startup, Granger received Title V air permit for their engine skid on 5/31/2016 (provided upon request).

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.

3Degrees can assess compliance with local regulations via EPA's Enforcement & Compliance History Online (ECHO) online server of regulated facilities, including reports for both Hancock County Landfill and Energy Developments Hancock County, the landfill and the engine skid, respectively (Attachments 16 & 17). 3Degrees regularly checks this website and confers with site personnel to ensure Hancock County Landfill continues to be in material compliance with all relevant local and Federal regulations.

The County's engineer Steve Wilson monitors compliance under EPA's Subtitle D. The Ohio EPA has a district office in the nearby city of Bowling Green, and sends representatives (Cornerstone Engineering or Tetra Tech – a subsidiary of Cornerstone) to perform periodic checks of compliance regarding its Gas Collection and Control System and submit quarterly deviation reports for both the Solid Waste and the Construction & Demolition Debris facilities. The reports are provided as Attachments 20 and 21. Additionally, Hancock County hires a third-party, Tetra Tech, to submit semiannual compliance status reports to Ohio EPA per the requirements of the Title V permit (provided in Attachment 22).

All project attestations are made available on the CAR portal. Hancock County Landfill has had no project related violations or enforcement actions during the 2024-2025 reporting period and remains in material compliance with all relevant permitting agencies. In March 2024, the facility did report a compliance issue relating to the Clean Water Act, measuring an exceedance in total suspended solids in the effluent. As noted in the NOV (Attachment 24), the exceedance was due to an unexpected quick succession of storms, or "acts of nature" as classified in the protocol. This event also occurred outside of the project boundary, as it is related to the surface water effluent, and therefore does not impact the collection and destruction of methane gas at the landfill.

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	CH ₄	B	☐

	Baseline LFG Flare Destruction			
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: 2024	Vintage:
Total methane destroyed: 2137 tCH ₄	Total methane destroyed: tCH ₄
Oxidation factor by soil bacteria: 0.1	Oxidation factor by soil bacteria:
Monitoring uncertainties discount factor: 0	Monitoring uncertainties discount factor:
Adjustment factor for baseline LFG destruction device: 0	Adjustment factor for baseline LFG destruction device:
Baseline Emissions: 53,851 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.

Not applicable, as default destruction efficiency values were used for this reporting period.

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: 2024	Vintage:
Emissions from fossil fuel use: 0 tCO ₂	Emissions from fossil fuel use: tCO ₂

Emissions from electricity use: 8.3 tCO ₂	Emissions from electricity use: tCO ₂
Emissions from supplemental natural gas: 0 tCO ₂	Emissions from supplemental natural gas: tCO ₂
Project Emissions: 8.3 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: 2024	Vintage:
Baseline Emissions: 53,851 tCO ₂ e	Baseline Emissions: tCO ₂ e
Project Emissions: 8 tCO ₂ e	Project Emissions: tCO ₂ e
Total GHG Emission Reductions/Removals: 53,843 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
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Project Diagram	Hancock County Landfill Project Diagram v6
Attestation of Title	CAR635 Attestation-Title-2023
Attestation of Voluntary Implementation	CAR635 Attestation-Voluntary-Implementation-12-16-2019
Attestation of Regulatory Compliance	CAR635 Attestation-Regulatory-Compliance
Monitoring Plan	Hancock County CAR Monitoring Plan Sep2024
Project Contributions to the U.N. Sustainable Development Goals Report Tool (if applicable)	Hancock SDG-Reporting-Tool-v2.0-1 2024
Project Data Report (this document)	CAR635 Hancock U.S.-Landfill-PDR-1
List of Findings	Hancock LOF Oct 2025
Variance Request (if applicable)	