



LRQA Independent Assurance Statement

Relating to Republic Service's Report for the 2017 and 2021 Calendar Years

This Assurance Statement has been prepared for Republic Services, Inc. in accordance with our contract.

Terms of Engagement

LRQA was commissioned by Republic Services, Inc. (Republic) to provide independent assurance of its greenhouse gas (GHG) emissions inventory for calendar years 2017 and 2021,¹ and environmental, safety, employee engagement, and charitable giving performance indicators for calendar year 2021 ("the Report") against the assurance criteria below to a limited level of assurance and materiality of the professional judgement of the verifier using LRQA's verification procedure and ISO 14064 - Part 3 for greenhouse gas emissions. LRQA's verification procedure is based on current best practice and is in accordance with ISAE 3000 and ISAE 3410.

Our assurance engagement covered Republic's operations and activities and specifically the following requirements:

- Verifying conformance with:
 - Republic's reporting methodologies for the selected environmental, safety, employee engagement, and charitable giving datasets; and
 - World Resources Institute / World Business Council for Sustainable Development Greenhouse Gas Protocol: A corporate accounting and reporting standard, revised edition (otherwise referred to as the WRI/WBCSD GHG Protocol) for the GHG emissions data.²
- Evaluating the accuracy and reliability of data and information for only the selected indicators listed below:
 - Direct (Scope 1), Energy Indirect (Scope 2) and Other Indirect (Scope 3) GHG emissions, using the operational control consolidation methodology;
 - Scope 3 GHG emissions verified by LRQA include Purchased Goods and Services; Capital Goods, Fuel and energy-related emissions, Upstream Transportation and Distribution, Waste Generated in Operations, Business Travel, Employee Commuting, and Upstream Leased Assets.
 - Quantity of biogas sent to beneficial reuse – financial control;
 - Water consumption – operational control;
 - Waste generated internally – operational control;
 - Safety performance metrics including Number of employee fatalities, Number of contractor fatalities, Total Recordable Incident Rate, and Lost Time Injury Frequency Rate for employees.
 - Employee engagement score; and
 - Number of people positively impacted.

The following sources were excluded from the GHG Emissions Inventory on the basis of their de minimis contribution to the total Scope 1 and Scope 2 GHG emissions and sense-checked during the engagement:

- GHG emissions from Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur hexafluoride (SF6) and Nitrogen trifluoride (NF3).

LRQA's responsibility is only to Republic. LRQA disclaims any liability or responsibility to others as explained in the end footnote. Republic's responsibility is for collecting, aggregating, analyzing and presenting all the data and information within the Report and for maintaining effective internal controls over the systems from which the Report is derived. Ultimately, the Report has been approved by, and remains the responsibility of Republic.

¹ CY 2017 is the base year, which was re-calculated and re-verified in order to account for updates due to acquisitions and divestments, and calculation methodology changes.

² <http://www.ghgprotocol.org/>



LRQA's Opinion

Based on LRQA's approach, except for the effect of the matters described in the Basis for Qualified Opinion, nothing has come to our attention that would cause us to believe that Republic has not, in all material respects:

- Met the requirements of the criteria listed above; and
- Disclosed accurate and reliable performance data and information as summarized in Tables 1 through 4 below.

The opinion expressed is formed on the basis of a limited level of assurance³ and at the materiality of the professional judgement of the verifier.

Basis for Qualified Opinion

Republic has not:

- Provided evidence that the spend-data methodology used to calculate the Scope 3 Category 5 emissions for Waste Generated in Operations is equivalent to other WRI recommended calculation methods.

Table 1. Summary of Republic's GHG Emissions Inventory for CY 2017 and CY 2021

Scope of GHG emissions		CY 2017 Tonnes CO ₂ e	CY 2021 Tonnes CO ₂ e
Scope 1	Direct GHG Emissions	14,909,948	13,643,797
Scope 2	Energy indirect GHG emissions (Location-based)	266,901	218,286
	Energy indirect GHG emissions (Market-based)	264,877	220,053
Scope 3	Category 1 Purchased goods and services	1,953,184	1,916,475
	Category 2 Capital goods	447,954	489,554
	Category 3 Fuel and Energy Related Activities	465,206	511,926
	Category 4 Upstream Transportation and Distribution	344,432	401,307
	Category 5 Waste Generated in Operations	77,668	111,016
	Category 6 Business travel	11,641	4,747
	Category 7 Employee commuting	167,108	134,510
	Category 8 Upstream Leased assets	3,989	2,730

1. Scope 2, Location-based and Scope 2, Market-based are defined in the GHG Protocol Scope 2 Guidance, 2015.

Table 2. Summary of Republic's Biogas Data for CY 2017 and CY 2021

Description	Unit	CY 2017	CY 2021
Biogas Sent to Beneficial Reuse ¹	SCF _N	73,415,946,433	76,152,476,705

1. Biogas is reported in terms of normalized standard cubic feet (SCF_N), as the biogas flow is normalized to 50% CH₄.

³ The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.



Table 3. Summary of Republic’s Other Environmental and Sustainability Data for CY 2021

Parameter	Quantity	Units
Water Consumed	498,098,548	Gallons
Waste Generated Internally ¹	10,910	Tons
Employee Engagement ²	84	Average score
Number of people positively impacted ³	918,019	Number of people

1. The waste metric considers material generated by Republic employees and disposed in a landfill. It does not include recycled materials.
2. Employee engagement value is based on results of a 5-question employee survey managed and analyzed by a third party. The value is the resulting average score on a 100-point scale.
3. The number of people positively impacted is based on population in areas where National Neighborhood Promise grants are awarded.

Table 4. Summary of Republic’s Safety Data for CY 2021

Parameter	Quantity
Number of employee fatalities	2
Number of contractor fatalities	0
Total recordable incident rate (TRIR) ¹	3.6
Lost Time Injury Frequency Rate (LTIFR) ²	6.58

1. Total recordable incident rate is derived as follows: $TRIR = \text{Recordable Cases} \times 200,000 / \text{Labor Hours}$. Rate includes employees and temporary contract labor.
2. Lost Time Incident Frequency Rate is derived as follows: $LTIFR = \# \text{ of Days Away from Work} \times 1,000,000 / \text{Total Hours}$. Rate includes employees and temporary contract labor.

LRQA’s Approach

LRQA’s assurance engagements are carried out in accordance with our verification procedure. The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- interviewing relevant employees of the organization responsible for managing GHG emissions, environmental, safety, employee engagement, and charitable giving performance data and records;
- recalculating sampled sources to demonstrate compliance with the reporting standards;
- assessing Republic’s data management systems to confirm they are designed to prevent significant errors, omissions or mis-statements in the Report; and
- verifying historical GHG emissions, environmental, safety, employee engagement, and charitable giving performance data and records at an aggregated level for the calendar year 2021.

LRQA’s Standards and Competence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 *Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition* and ISO/IEC 17021 *Conformity assessment – Requirements for bodies providing audit and certification of management systems* that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.



Signed

Dated: July 25, 2022

A handwritten signature in black ink, appearing to read 'Ali Schmidt', is written over the printed name.

Ali Schmidt
LRQA Lead Verifier
On behalf of LRQA, Inc.
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LRQA reference: UQA00002100

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