Climeworks

Orca Facility Output Audit Report

For Puro.Earth

CO_2 Removal Supplier	Climeworks
Removal Method	Direct Air Capture & CO_2 Storage in Basalt Formations
Production Facility	Climeworks Orca
Production Facility Address	Capture Facility: Nordurvellir 4, 816 Ölfus, Iceland
Net Volume of CO_2 Removal	205.031 CORCs
Removal Period	September 1st, 2025 – October 31st, 2025
Auditors	350Solutions: Guy Hardwick Bill Chatterton
Report Date	January 28th, 2026
Version	V1.2

Contents

Acronyms

CDR	Carbon dioxide removal
CO_2	Carbon dioxide
CORC	CO_2 Removal Certificate
DAC	Direct air capture
EF	Emissions factor
GHG	Greenhouse gas
MRV	Measurement, Reporting, Verification
RECs	Renewable energy certificates

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OUTPUT AUDIT REPORT		
Company: Climeworks Orca	Company Contact: Pietro Rossi* Fintan Tuohy	VVB: 350 Solutions Guy Hardwick Bill Chatterton
Removal Method: Direct Air Capture & CO_2 Storage in Basalt Formations		
Report Date: January 28th, 2026		
Document No: 350-PU2601.01-OA		
Revision: V1.2		

**primary contact(s)/lead author(s)*

1. Introduction

Puro.Earth contracted 350Solutions to perform an audit of carbon dioxide removal credit (CORC) claims for Climeworks Orca Direct Air Capture (DAC) facility. 350Solutions declares that we are an impartial auditor, free from any conflicts of interest, capable, and qualified to complete this audit according to Puro Standard and related Validation and Verification Body Requirements. The crediting period for the validation is Dec 1, 2023 – Dec 1, 2028. This Output Audit was conducted to verify Climeworks reported CORCs for the period of September 1st, 2025 – October 31st, 2025.

In September 2025, 350Solutions conducted a Production Facility audit of the process and a desk review of documents provided by Climeworks, including the facility audit documentation completed by DNV. 350Solutions affirms that Orca has the appropriate equipment, procedures, and protocols in place to quantify GHG removal through DAC and CO_2 storage in Basalt Formations in accordance with the requirements of the relevant Puro.Earth General Rules and Geologically Stored Carbon methodology:

- Puro.Earth General Rules v3.1 [1]
- Geologically Stored Carbon v1.0 (2021) [2]

Table 1: Output Audit Summary

Audit Summary	
CO_2 Removal Supplier	Climeworks AG
Removal Method	Direct Air Capture & CO2 Storage in Basalt Formations
Verification Type	Supplier Output Audit; Puro Standard General Rules (v3.1) and Geologically Stored Carbon Methodology (Edition 2021, v1.0)
Production Facility Name and Registry	Climeworks Orca, Facility ID: 631817
Production Facility Locations	Capture Facility: Nordurvellir 4, 816 Ölfus, Iceland
Reporting Period	September 1st 2025, – October 31st, 2025
Verified CORCs	205.031 tonnes CO2-eq
Audit Kickoff Date	December 31st, 2025
Audit Report Date	January 28th, 2026

2. Technology Description

2.1. Process Overview

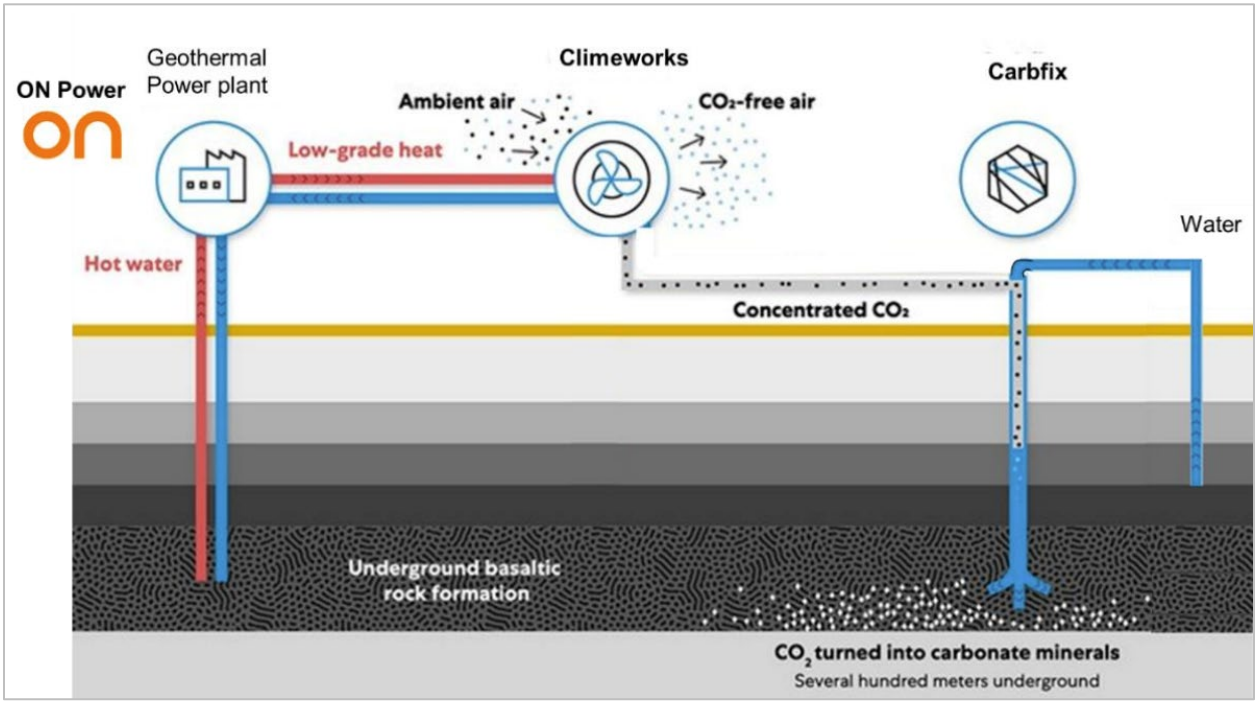

Figure 1: Orca process description (Source: Climeworks)

Climeworks Project Orca is the first DAC facility with permanent storage capabilities built by Climeworks and is based at the Hellisheiði geothermal powerplant, 50km southeast of Reykjavik. Orca is a three-step project consisting of DAC, transport and geological storage of carbon dioxide, all powered by the locally produced geothermal energy plant operated by ONPower, a subsidiary of Orkuveita Reykjavík (Reykjavík Energy). ONPower reports power and water usage monthly to Climeworks for use as part of their CORC calculations. Figure 1 shows a simplified process flow diagram for the Orca capture and storage system.

Figure 2: Left. Rear of contactor containers showing array of fans for drawing CO_2 across sorbent material. Right. Isolation door of contactor container sub-units for application of heat and vacuum for CO2 desorption.

2.2. Capture and Processing

The first step of the system involves DAC which utilizes a series of fans and 'collector containers' containing solid sorbent material to chemically bind atmospheric carbon dioxide (CO_2). Air with reduced CO_2 concentration is released back into the atmosphere. Orca has 8 'contactor containers', each consisting of 6 container sub-units which operate independently. Once the sorbent in a sub-unit is saturated with CO_2, it enters a desorption phase where the sub-unit is isolated and heated to around 100°C with a vacuum applied, liberating the CO_2 from the sorbent. The process makes use of low-grade waste heat from the geothermal facility. The sorbent material can complete several thousand cycles before needing replacement. displays the front and back of each of the contactor containers, and how individual sub-units are isolated with a door that slides across each container. Figure 3 shows a simplified depiction of the vacuum- temperature swing adsorption process.

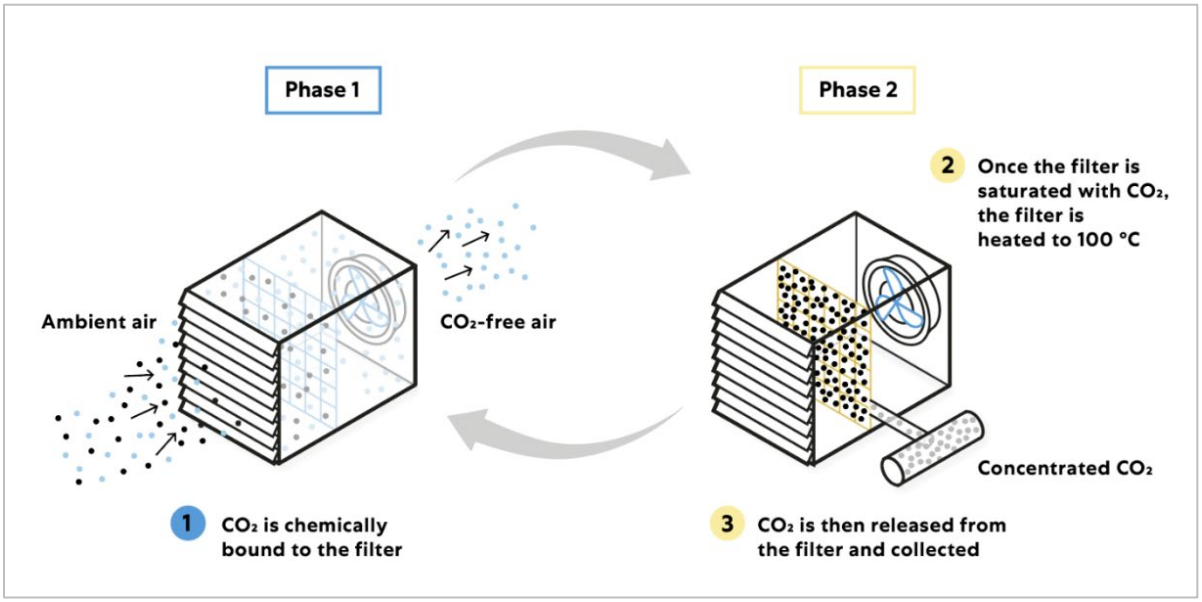

Figure 3: Depiction of the Climeworks vacuum-temperature swing adsorption process

The liberated CO_2 from each collector container feeds a centralized, temporary storage vessel before it is further conditioned into grades of CO_2; high quality, medium quality and low quality. The high-quality CO_2 goes directly to a liquefaction unit, where it is dehydrated, cooled, and condensed, producing liquified CO_2 with 99.99% purity. The liquified CO_2 is then contained in a pressurized tank for temporary storage, prior to transportation for injection and permanent storage. The medium grade quality CO_2 is further conditioned prior to liquefaction. Low grade CO_2 is vented out. The system is estimated to be [redacted] efficient in overall recovery of CO_2 from the sorbent material based on measurements from electromagnetic volumetric flow meters and concentration meters placed throughout the system.

2.3. CO2 Transportation

The liquified CO_2 is then transported in gaseous form, via a 3,282m long, buried, plastic pipeline running to the geological storage injection site, þrengsli, operated by the project partner, CarbFix. The gas is transported at 20-bar. The pipeline itself is rated for operations at 24.5-bar and is fitted

with release valves which are activated if the pipeline pressure exceeds 25-bar. The total mass of CO_2 transported is measured leaving the DAC facility and upon injection into the well. This enables Climeworks to quantify any leakage associated to the transportation pipe.

2.4. Injection and Storage

Carbfix then mixes the gaseous CO_2 stream into a water stream, pumped from two local wells, at a depth of 200m below the injection well. The pressure at this depth enables the CO_2 to dissolve in the water inside the injection pipe, before it reaches the point of injection, at least 400m below the surface. The water is sampled to characterize any CO_2 already dissolved in the water prior to injection of CO_2 to determine the baseline for CORC calculation. Water metering is reported by Carbfix to Climeworks for reporting as part of their CORC calculations. The CO_2 charged water is then injected where, due to its density being greater than the surrounding water, it sinks into the cracks and pores of the basaltic rock and can't rise back to the surface. Overtime, the CO_2 reacts with the basalt divalent cations, to form carbonate minerals, permanently storing the CO_2 in the pores of the basaltic geological reservoir. This storage mechanism is commonly known as mineral trapping. It has been demonstrated that after two years, all the CO_2 will have mineralized, ensuring long term storage [3]. The well is managed by Carbfix in line with all local laws and regulations and follows the EU CCS directive. During injection, pressure, temperature, and flow for both the gaseous CO_2 stream and the injected water are recorded continuously as part of Carbfix normal operations. Figure 4 depicts the route taken by the underground pipeline to the injection well as well as locations of the water supply wells, monitoring wells and boundary of the geological storage site. Carbfix assumes full responsibility for injection, monitoring, and long-term liability of the injection and storage site.

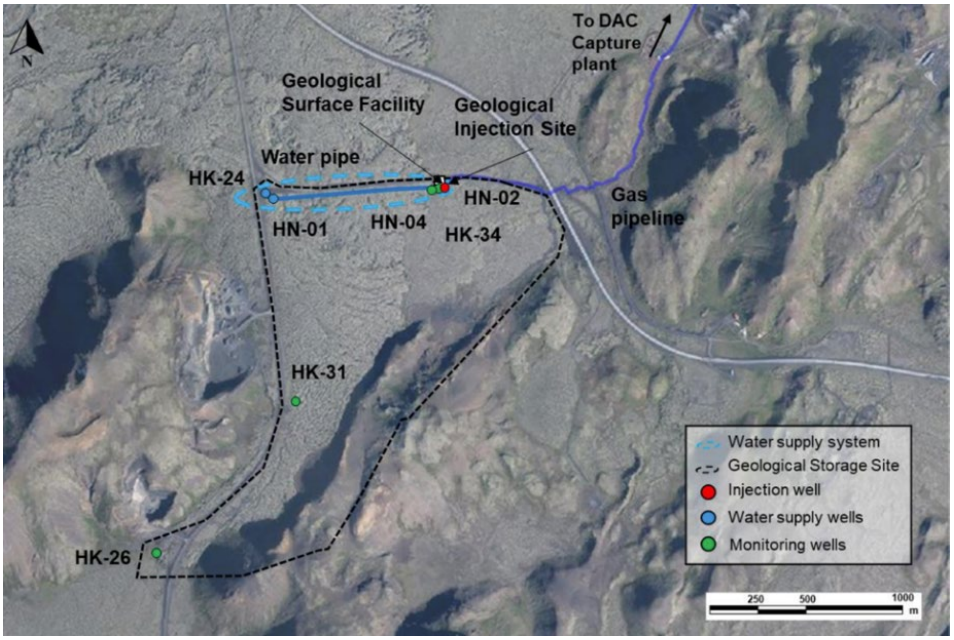

Figure 4: Diagram depicting CO_2 pipeline leading from Orca to injection site þrengsli alongside injection site, water wells, monitoring wells and boundary of the geological storage site.

2.5. Inputs and Outputs

A summary of process inputs and outputs for Orca's operations are included in Table 2.

Table 2: Verified DAC Production Data

Input / Output	Item	Verified Amount Over Monitoring Period[1]	Notes (Specifications, source, etc.)
INPUTS			
Electrical Energy	DAC, liquefaction, filtration, compression, misc. site usage	[Redacted]	100% provided by ONPower Geothermal power facility. Market leakage determined to be 0.
Thermal Energy	DAC, misc. site usage	[Redacted]	100% provided by ONPower Geothermal power facility. Market leakage determined to be 0.
Water	Injection usage, freshwater usage during ONPower energy generation	[Redacted]	ONPower provides water to Climeworks for DAC operations, who return cooling water once used. Injection water is pumped from the reservoir by Climeworks
DAC Units & Infrastructure	DAC containers, liquefaction, filtration, compression, storage, misc. site usage	-	Orca facility lifetime is expected to be until at least 2031. Embodied emissions amortization starting again 2026
DAC Sorbent	Sorbent consumed during monitoring period	[Redacted]	Spent sorbent
Maintenance and Repairs	Consumables used during associated maintenance for DAC units and Orca infrastructure	-	Internally tracked and compared to designated number of emissions within the total grey emissions to be amortized.
OUTPUTS			
Captured CO_2	Gross CO_2 captured during DAC process	227.22 tonnes*	Total CO_2 captured during DAC measured by Climeworks
Stored CO_2	Gross CO_2 injected into geological storage	227.218 tonnes	Total CO_2 injected, measured by Carbfix and reported to Climeworks
CO_2 released	Total amount of CO_2 released during injection and storage	0.040 tonnes	Total CO_2 released during injection and storage, measured by Carbfix and reported to Climeworks
Operational Emissions	Emissions released during Climeworks and Carbfix operations	22.148 tonnes	Total operational emissions related to heat, electricity, sorbent and water usage.

** Discrepancy between Captured CO_2 (227.22 tonnes) and Total CO_2 stored (227.218 tonnes) is within the margin of error for the instrumentation being used. As the Stored CO_2 measurement is the closest to the injection pipeline, this is the one that is used for quantification of CORCs*

2.6. Changes since last Output Audit

Since the last Output Audit conducted in December 2025, Climeworks has confirmed that the Orca facility has not undergone any major project changes.

3. Audit Summary

3.1. Audit Approach

A planned series of audit activities were conducted by 350Solutions to independently validate and verify production and output data, and CORC claims for the reporting period. The audit was conducted following the specifications of Puro General Rules (V3.1) and Geologically Stored Carbon Methodology (Edition 2024, v2). Specific audit activities conducted are summarized in Table 3. Auditor qualifications are attached as Appendix 2.

Table 3: Audit Activities

Date(s)	Verification Activity	Verification Tasks	Documents Reviewed
December 31st, 2025	Introductory Document Review and information exchange	- Review of LCA and supporting documentation - Review of Puro CORC calculations - Review of product properties - Review of product end use	- CDR Report Orca.pdf - Puro CORC Report Orca - 2025-31-10.xlsx - Monitoring Plan Orca - 31-10-2025.xlsx - 2025-09 Orca Injection Monitoring Report.pdf - 2025-10 Orca Injection Monitoring Report.pdf - _Cold water Overview.xlsx - 2025_09_CW Orca Electricity.pdf - 2025_09_CW Orca heat.pdf - 2025_10_CW Orca Electricity.pdf - 2025_10_CW Orca Heat.pdf - 20250901 Copy of Daily energy report - Orca.xlsx - 20251001Copy of Daily energy report - Orca.xlsx - 2025_09_ON Power Injection.pdf - 2025_10_ON Power Injection.pdf - Sep Oct Orca sorbent emissions.xlsx - Audit Document Index - GSC - 2025.10.31 - ORCA.xlsx - Contact information to auditor.xlsx - Disclosure since last audit Orca - 31-10-2025.xlsx
December 31st, 2025 – January 12th, 2026	Data Review	- Review of LCA and supporting documentation - Review of Puro CORC calculations - Review of raw material sources and sustainability - Review of system inputs and outputs - Review evidence of product output - Review of product properties - Review of product end use - Review of equipment and calibrations - Reviewed previous Output Audit Reports - Reviewed original production facility audit documentation	
January 12th, 2026 – January 19th, 2026	Report Writing	- Compose Audit Report - Internal quality control - External review	Puro CORC Report Orca_V1.1 - 2025-31-10.xlsx CDR Report Orca.pdf

3.2. Verified Output & CORCs

Table 4 includes the specific CORCs claimed by Climeworks for its Orca facility during the reporting period, as well as the figure verified by 350Solutions during the data review. Other operational figures, and those verified by 350 are also present.

Table 4: Verified CORCs for the Orca Facility

Performance Metric Name / Description	Reported Value	Verified Value[1]	Data Source	Reporting Period
CO_2 Stored	227.218 tonnes	227.218 tonnes	- Puro CORC Report Orca – 2025-31-10.xlsx	September 1st 2025 - October 31st 2025
CO_2 Emissions	22.148 tonnes	22.148 tonnes		
CO_2 Releases/ Reversals	0.040 tonnes	0.040 tonnes		
Total CORCs	205.031	205.031		

[1] *Verified values are based on verification of final production records for the reporting period.*

4. Audit Findings

4.1. Summary of Audit Findings

350Solutions has reviewed and audited the documentation of the technology, the instrumentation, the procedures, performance and collected data and has found that the data presented in the Puro Audit Package and during the site visit and follow up:

☒ ***Meets the requirements of the Puro General Rules V3.1 and* Geologically Stored Carbon Methodology (Edition 2021, v1)**

☐ ***Meets the requirements of the Puro General Rules V3.1 and* Geologically Stored Carbon Methodology (Edition 2021, v1) *with minor modifications***

☐ ***Does Not Meet the requirements of the Puro General Rules V3.1 and* Geologically Stored Carbon Methodology (Edition 2021, v1)**

350Solutions utilized a reasonable level of assurance in performance of the output audit. A summary of findings associated with each primary requirement of the *Puro General Rules* and *Geologically Stored Carbon Methodology* and any identified issues with the audit are summarized below.

Table 5: Audit Findings

Puro GSC Method. Section Ref.	Audit Verification Topic	Final Findings
1.1	Eligible Activity Type	Acceptable. The project activity aligns with the Puro Geologically Stored Carbon Methodology v1.0 and meets the definition of a long-term CO_2 Removal activity.

1.1	Eligible Geological Storage Type	Acceptable. The geological storage approach conforms to the Methodology's requirements for long-term, durable storage exceeding 100 years.
1.1	Eligible Carbon Capture Type	Acceptable. The carbon capture technology is consistent with the eligible capture types described in the Methodology and demonstrates capability to produce long-term CO_2 removal within the defined activity boundary.
1.2	Eligibility Requirements for Activities	Acceptable. Climeworks demonstrated compliance with all activity-level eligibility criteria, including demonstration of Environmental and Social Safeguards, additionality, and leakage assessment. Supporting documentation was complete and consistent with Puro's expectations.
1.3	Eligibility Requirements for the CO_2 Removal Supplier	Acceptable. Climeworks is a registered account holder, fulfills all governance and contractual requirements, and demonstrated the necessary legal control over the facility.
2	Point of CORC Creation	Acceptable. Climeworks clearly identified the point at which CO_2 becomes eligible for CORC issuance.
3	Activity Boundary for Net-Negativity	Acceptable. The system boundary is correctly defined and includes all relevant SSR components required for a full LCA. Climeworks demonstrated that the activity remains net-negative within the defined boundary.
4.1	Quantification of Net CO_2 Removal	Acceptable. Quantification of Net CDR follows the Methodology's calculation rules, with transparent inputs and conservative assumptions. Net CDR aligns with the requirement to subtract process emissions from gross CO_2 captured to derive CORC-eligible Output.
4.2 & 5.1	Evidence for Captured CO_2	Acceptable. Climeworks provided complete measurement records demonstrating accurate, continuous, and verifiable CO_2 capture volumes. Evidence meets Methodology requirements for demonstrating CO_2 capture prior to issuance and for Output validation.
4.3	Project Emissions Within Activity Boundary	Acceptable. All relevant emissions sources within the activity boundary were accounted for in accordance with the Methodology. Supporting documents and calculations confirm that emissions were accurately quantified and applied in the Net CDR balance. Eligible RECs were purchased and applied to reduce these emissions.
5.2	Data Records for CO_2 Quantities	Acceptable. Data records were complete, traceable, and consistent with audit requirements. Measurements were supported by calibrated instruments and logs were available for the full reporting period.
5.3	Evidence of Permanent Storage	Acceptable. Climeworks provided documentation demonstrating that CO_2 is stored in a geological reservoir compliant with the permanence criteria of the Methodology and with the Puro Standard definition of long-term storage (100yrs).
5.4	Evidence of No Double Counting	Acceptable. Climeworks demonstrated that CO_2 storage claims are attributed solely to CORCs and that no overlapping claims, product-based claims, or NDC-linked claims exist.
4.5	Uncertainty Assessment & Conservative Approach	Acceptable. Climeworks applied conservative assumptions and conducted appropriate uncertainty analysis consistent

		with Methodology requirements. No material sources of unquantified uncertainty were identified.
5	Verification Evidence & Documentation Completeness	Acceptable. All documentation required under the Methodology and Puro General Rules was provided, well-organized, and sufficient to complete the audit. The information demonstrated traceability, accuracy, and alignment with all verification requirements.

Additional details regarding audit activities, documents reviewed, and observations during the audit process are summarized in Appendix 1.

4.2. Critical Findings and Exceptions

Assessment of the output audit package and associated CORC report identified several initial findings (Appendix 1). All findings have been addressed and closed. No critical findings or exceptions were documented during this output audit.

4.3. Forward Action Requests and Recommendations

A full list of Output Audit findings is provided in Appendix 1. No Forward Action Requests (FAR) have been identified during this output audit for the associated monitoring period.

5. Revision History

Version	Date Issued	Noted Changes
Draft v1.0	January 26th, 2026	Initial Draft
Draft v1.1	January 27th, 2026	Post internal quality assurance review, minor edits
Final v1.2	January 28th, 2026	Edits following review by Puro and Climeworks

6. Auditor Signatures

Auditor Information		
VVB	**Auditor**	**350Solutions Project ID No.**
350Solutions, Inc.	Guy Hardwick (Lead Verifier)	PU2601.01
350Solutions, Inc.	Bill Chatterton (Quality Assurance)	

Guy Hardwick

Digitally signed by Guy Hardwick
Date: 2026.01.29 18:33:47 Z

Bill Chatterton

Digitally signed by Bill Chatterton
Date: 2026.01.29 18:33:59 Z

Signed: Guy Hardwick (Lead Verifier) Bill Chatterton (Quality Assurance)

6.1. Validation and Verification Body Details

350Solutions Inc. declares that we are an impartial verifying body, free from any conflicts of interest, capable, and qualified to complete this verification for the current operational period according to the Puro Standard and applicable methodologies.

350Solutions is an accredited inspection & verification body by ANAB under ISO 17020:2012 for completion of ISO 14034:2016 Technology Verifications and was the first accredited entity in North America for ISO 14034. 350Solutions is based out of Raleigh, North Carolina, USA. 350Solutions Technical Lead for the Climeworks Output Audit is Guy Hardwick. Quality assurance was provided by Tim Hansen. Complete qualifications are attached as Appendix 2. Our opinion is provided with a reasonable level of assurance for Climeworks' activities at the Orca project.

Notice: 350Solutions, Inc. declares that we are an impartial auditor, free from any conflicts of interest, capable, and qualified to complete this audit according to the Puro Standard and related Validation and Verification Body Requirements. Verifications and audits conducted by 350Solutions are based on an evaluation of technology performance and CO_2 removal claims via site visit observations and review of data submitted by the audited company. Audits are completed in accordance with rules and methodologies specified by Puro and utilizing the appropriate quality assurance procedures established under the 350Solutions accredited ISO 17020/14034 Quality Management Program, noting that this verification is not a fully compliant ISO 14034 verification. 350Solutions makes no expressed or implied warranties as to the performance of the technology and does not certify that a technology will always operate at the levels verified, nor that it meets all state, local, or federal legal requirements.

7. References

[1] Puro.Earth, Puro.Earth General Rules version 3.1, 2023, Website: https://puro.earth/document-library?tab=methodologies

[2] Puro.Earth, Puro.Earth Geologically Stored Carbon version 1, 2021, Website: https://puro.earth/document-library?tab=methodologies

[3] Matter et al., Rapid carbon mineralization for permanent disposal of anthropogenic carbon dioxide emissions, 2016, Website: https://www.science.org/doi/10.1126/science.aad8132

Appendix 1: Log of Findings

All material clarifications, misstatements, and omissions have been resolved.

Type	Finding/Issue	Required Action	Supplier Response	350 Response	2nd Supplier Response	Conclusion/Resolution
FAR (prior)	CDR Reports in the previous Output Audit did not reflect the correct emissions factors.	Ensure the CDR reports are updated with the correct emission factors, with update made to the sorbent EF and update to all EFs to account for the use of RECs and project Silverstone.	Climeworks has updated the file for this Output Audit data package.	Confirmed – Thank you for making the update	-	FAR from previous output audit addressed appropriately.
Clarification	CDR Report pdf shows aggregated data from production dating back to 2022. It does not show the data associated to the reporting period for this Output Audit	Please update the CDR report pdf to show the data associated to the Monitoring period being analyzed in this output audit.	Updated pdf sent	Updated document received and is appropriate.	-	Item concluded.

Appendix 2: Verifier Qualifications

Supporting documentation, including verifier resumes, and verifier or corporate accreditations are also included in this appendix.

Verifier Qualifications	Criteria Met?	Evidence / Notes *(note how the criteria was met, specific documents - resume/CV, publications, certifications, etc.).*
Verifier has relevant technical knowledge of the type of technology being evaluated and carbon removal processes in general		
A) Does Verifier have:		
1. An in-depth technical knowledge of the technology type under verification;	☑	350Solutions is accredited to ISO/IEC 17020:2012 and ISO 14034 Environmental Technology Verification (ETV) as a Type A (third party) Inspection Body (ANAB Certificate Number: AI-2618). The technical scope of 350's accreditation includes verification of performance and environmental impact as it relates to design, materials, equipment, installation and operations of technologies in the categories of Energy, Clean Production and Process, and Air Pollution Monitoring and Abatement. As documented in 350Solutions' ETV Standard Operating Procedure (ETV QPM 350-223-03), and Quality Systems Procedures for verifier qualifications (QSP-350-005-02), 350Solutions conforms to the requirements of ISO 17020 Annex A with respect to verifier qualifications and procedures. These procedures and quality management programs are generally relevant to verification under the Isometric Standard. Note that verifications completed for Isometric are not equivalent to ISO 14034 verifications. 350 staff have participated in the evaluation and verification of novel technologies that sequester carbon via various methods, including biomass conversion to liquids, solids, and other products which are then permanantly stored in ways such as land application or geologic storage, conversion of captured CO2 into building materials and co-products, and the production of chemicals, fuels, and products via biomass pyrolysis and gasification. 350 also served as lead verifier for the Carbon XPrize competition and contributed to the development of procedures and processes for verification of relevant calculations, modeling, and statistical methods in order to assess team results and calculations of performance metrics and uncertainty. 350 has demonstrated knowledge of data quality and data validation approaches and execution in supporting verification of performance claims and results.
2. Knowledge of specific risk areas associated with performance of such technologies (i.e. common failure points, performance issues, barriers to scaleup);	☑	
3. Knowledge of the environmental implications related to the use of the technology from a life cycle perspective, such as impact of the technology on lifecycle CO2 emissions and carbon removal;	☑	
4. Knowledge of relevant applicable test methods and standards for evaluating performance or impact of the technology;	☑	
5. Knowledge of relevant calculation, modeling, and statistical methods in order to assess test results and calculations of performance metrics and uncertainty, as applicable;	☑	
6. Knowledge of data quality and data validation approaches, including QA/QC procedures, for example.	☑	
Verifier is a credible independent 3rd party		
B) Is Verifier:		
1. third-party body independent of the team registered for the Isometric Registry	☑	350Solutions is accredited to ISO/IEC 17020:2012 and ISO 14034 ETV as a Type A (third party) Inspection Body. As documented in 350Solutions ETV Policy Manual (ETV QPM 350-200-03), 350Solutions conforms to the requirements of ISO 17020 Annex A with respect to impartiality for Type A inspections, pursuant to ISO 14034 activities.
2. Not directly involved in the design, manufacture or construction, marketing, installation, use or maintenance of the specific technologies submitted to Isometric for verification, or represent the parties engaged in those activities.	☑	
3. Not part of a legal entity that is engaged in design, manufacture, supply, installation, purchase, ownership, use or maintenance of the items inspected.	☑	

Guy Ingram-Hardwick
Carbon Removal Verification Engineer, 350Solutions

EDUCATION:
MEng Materials Science and Engineering, Loughborough University, UK - 2022

EXPERIENCE SUMMARY:
Guy Ingram-Hardwick is a Carbon Removal Verification Engineer, with experience in materials engineering, process engineering, MRV protocol development, experimental design and life cycle analysis (LCA). At 350 Solutions, Guy's efforts center on validation and verification of varied carbon removal pathways, including biochar, biomass storage, and DAC+S. Guy has led the verification of a biochar CDR supplier registered with Puro.Earth and supported verifications of bio-oil and biomass geologic storage pathways as well as DAC technology assessments. Guy began his experience in carbon removal working to develop an LCA model for Brilliant Planet, a marine based carbon removal company growing, processing and burying microalgae for carbon sequestration. Once completing the LCA model, Guy managed the third-party verification and co-authored the MRV methodology for Brilliant Planet before managing its adoption with carbon market registries and developing relevant documentation required for carbon removal verification and crediting.

Guy also studied degradation mechanisms for biodegradable polymers which was the focus of his Master's thesis. His work during the Master's thesis and at Brilliant Planet provided experience in experimental design and execution, including conducting field trials for developing novel technologies. This included leading design and execution of demonstration and testing of processing and storage of the microalgae, displaying the long-term permanence of the carbon removal system. Prior to his experience at Brilliant Planet, Guy worked as a process engineer at Pirelli's rubber compound manufacturing plant in Burton-on-Trent with a focus on data analytics for driving continuous improvement, as well as developing familiarity with industrial manufacturing operations and data, quality assurance, and international standards.

RESEARCH AND PROFESSIONAL EXPERIENCE:
January 2025 – Present: Carbon Removal Verification Engineer, 350Solutions
Verify carbon dioxide removal technologies on behalf of registries and private companies ensuring high quality and meaningful climate impact.

Jul 2022 – Dec 2025: LCA and MRV Associate, Brilliant Planet
Quantified the carbon removal efficiency of the Brilliant Planet system across a variety of engineering designs using LCA. Developed the proprietary MRV methodology and PDD as well as setting up a novel experimental design to display the permanence of the stored carbon.

July 2019 – September 2020: Process engineer, Pirelli
Completed data analytics to drive continuous improvement for increasing efficiency, safety and rubber compound quality.

Bill Chatterton
Senior Verification Scientist, 350Solutions

EDUCATION:
B.S. Environmental Science, SUNY at Plattsburgh, 1982
A.A.S. Environmental Technology, Paul Smith College, 1979
Certified Measurement and Verification Professional (CMVP), 2019

EXPERIENCE SUMMARY:
Mr. Chatterton has over 30 years of experience in management of energy and environmental technology development and demonstration projects and programs, as well as multimedia environmental engineering efforts. The majority of his recent work has focused on the evaluation of innovative carbon capture, utilization, and removal technologies. Mr. Chatterton has supported the development and management of large technology evaluation programs in the advanced energy, transportation, and climate change areas.

RESEARCH AND PROFESSIONAL EXPERIENCE:
2019-Present Sr Verification Scientist – 350Solutions, Inc.
Owns and operates a small cleantech engineering consulting business focused on the independent evaluation of new cleantech innovations and their impact on the environment and carbon emissions. Provides engineering consulting, testing and evaluation, techno-economic assessment, and other support to companies developing, using, or investing in new clean technology innovations. Manages administrative, business development, and project activities for 350Solutions.

2010-2019: Program Manager - Energy and Environment, Southern Research
Managed scientific and technical staff performing research, development, and evaluation of innovative clean energy technologies. Projects range from $25,000 to $6million in size, and are funded by the US Department of Energy, Department of Defense, and commercial partners. Technical focus areas are conversion of biomass to fuels and chemicals, carbon capture and utilization, energy efficient building technologies and renewable energy generation.

2000-2009 Sr. Project Leader, Environmental Engineer, Southern Research

PROJECT EXPERIENCE:
Mr. Chatterton has executed several independent technology performance verifications of emerging carbon, energy and transportation technologies for 350Solutions and previously at Southern Research Institute. Mr. Chatterton has completed clean technology evaluations for the Department of Defense, state energy agencies, commercial clients, investors, and technology developers, involving evaluation of commercial feasibility, economic and environmental impacts, and technology performance. Mr. Chatterton served as a Lead Verifier for the NRG COSIA Carbon XPrize – a $20M prize competition for technologies that capture and beneficially utilize CO_2. Mr. Chatterton is also a Certified Measurement and Verification Professional, issued in 2019.