



PURO PRODUCTION FACILITY AUDIT REPORT

Mammoth

Puro Standard General Rules Version 4.0 (Issued in Feb 2024)

Facility ID: 417791

Audit Start - End date: 28.8.2024 - 17.9.2024

Project Number: PRJN-701040

DNV Team: Ali Daoud, Heidi Kakela

Carbon removal method: Geological Stored Carbon Edition 2024, V2



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Attachments:

ATTACHMENT 1 Final Mammoth Auditors Notes – ADI GSC2024



Introduction

This report summarises the results and conclusions from the performed production facility audit. The audit is performed as a formal part of the Puro.earth certification process. The key objective is to determine the compliance of the operations with the Puro requirements.

DNV

DNV is one of the world's leading certification, assurance, and risk management providers.

Whether certifying a company's management system or products, providing training, or assessing supply chains, and digital assets, we enable customers and stakeholders to make critical decisions with confidence.

We are committed to support our customers to transition and realize their long-term strategic goals sustainably, collectively contributing to the UN Sustainable Development Goals.

Production facility standing data

(PURO General Rules Version 4.0)

General information

Facility unique identity	417791
CO2 Removal Supplier registering the Production Facility	Climeworks AG
Name	Mammoth
Location	Suðurvellir 1, 816 Ölfus, Iceland
Date on which the Production Facility became eligible to receive CORCs	7/09/24
Volume of Output during the full calendar year prior to registration	N/A
Removal Method(s) for which the plant is eligible to receive CORCs	Geologically Stored Carbon Edition 2024, V2
Production Facility has benefited from public support	No
Removal Method specific information as may be specified in the relevant Removal Method specific Methodology	Direct Air Capture and Geologically Stored Carbon
Does the Production Facility Audit documentation fulfil the minimum criteria set in 2.2.4.2 in Puro Standard General Rules Version 4.0?	Yes
Validity of LCA	17.9.2024 – 16.9.2025
Has the CO2 Removal Supplier attested to the accuracy of the information provided by its signature as required in 2.2.4.3 in Puro Standard General Rules Version 4.0?	Yes

Short description of facility and any exclusions from verification scope observed

The Climeworks Mammoth facility is a Direct Air Capture plant in Iceland, where CO₂ is captured from the atmosphere using a sorbent. Captured CO₂ is stored through Climeworks' partner, Carbfix. Here, the CO₂ is dissolved in water and injected into the subsurface to achieve permanent storage of CO₂ through rapid in-situ mineralisation.

Climeworks AG, as the project applicant, has the relevant contractual agreements in place with all parties involved to ensure ownership of produced CORCs.

Statement of confidentiality

The contents of this report, including any notes and checklists completed during the audit will be treated in strictest confidence, and will not be disclosed to any third party without the written consent of the customer, except as required by the appropriate accreditation authorities.

Disclaimer

An audit is based on verification of a sample of available information. Consequently, there is an element of uncertainty reflected in the audit findings. An absence of nonconformities does not mean that they do not exist in audited and/or other areas. Prior to issuing an assurance opinion this report is also subject to an independent DNV internal review which may affect the report content and conclusions.

Audit results

Positive indications

Climeworks have successfully managed to scale up their processes taking along learnings from the successful operations at Orca. They have detailed processes related to monitoring and data collection that allow for easily verifiable outputs when they will generate CORCs.

Recommendations for improvement

- The alternative method of calculating the amount of CO₂ injected is approved by Puro. Climeworks may consider adding this clarification within the PDD to make a record for future verifications.
- Climeworks may consider providing additional evidence as to the quantifiability of the positive impacts if/when available. See 3.9.1 (b).

Audit findings

Detailed findings requiring corrective actions:

- With regards to criteria 3.6.2, it is acknowledged that there has been an evaluation conducted on nationally determined contributions and that there remains a lack of clarity from the host country on this matter. Pending clarifications on this matter at UNFCCC level, Climeworks should maintain ongoing engagement on this matter for the next audit to gain clarity, as the outcome of the situation could impact the issuance of CORCs.
- With regards to criteria 3.8.5, an environmental impact assessment was not deemed necessary for the additional DAC facility by the relevant authorities. An environmental impact assessment was, however, undertaken for the storage component of the project. In conjunction with this EIA, Climeworks should add a water usage and management plan to the submitted documentation.

Conclusion

Conclusion	
The company is found compliant, with qualifications, towards CORC requirements set in Puro Standard General Rules Version 4.0 and Geologically Stored Carbon Edition 2024, V2, and CORCs can be issued to the Production Facility	Yes
The company is found NOT to be fully compliant towards CORC requirements set in Puro Standard General Rules Version 4.0 and Geologically Stored Carbon Edition 2024, V2 and corrective actions are needed before CORCs can be issued to the Production Facility	

[illegible]

