Facility Audit Statement

Statement No	Date of Issue	Valid to:
FAS – 0015	06.03.2024	05.03.2029*

*This statement is valid until the issue of the new statement but will expire no later than 5 years from the Date of Issue.

Sonnenerde GmbH
Oberwarter Strasse 100
7422 Riedlingsdorf

Facility Reg. Number: 643002406801000817
ID-Number: PE-70402

Statement

Based on the verification process, bio.inspecta AG states that the organization has defined and maintained procedures relevant for the production of CO2 removal. Based on the verification the facility is found compliant with Puro.earth CO2 Removal Marketplace requirements.

Facility Registration Number	CO2 Removal Type	Eligibility of the Production Facility
643002406801000817	**Biochar**	**Eligible**

Place, 06.03.2024

Ueli Steiner
CEO

Philipp Seitz
Auditor

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Output Audit Statement

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Statement No	Date of Issue	CO2 Removal type	CO2 Removal factor
OAS-0028	06.03.2024	Biochar	P500, Batch EBC ba-at-34-1-4 (01.09.22 – 31.08.23) = 2,067 tCO2 / t (dry) - Pyrodry, Batch EBC ba-at-34-2-1 (01.09.23 – 19.12.23) = 1,680 tCO2 / t (dry)

Sonnenerde GmbH
Oberwarter Strasse 100
7422 Riedlingsdorf
ID-Number: PE-70402

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P500 Facility registration number: 643002406801000299
Facility Audit Statement: No. FAS-0005 valid to 14.10.2026

Pyrodry Facility registration number: 643002406801000817
Facility Audit Statement: No. FAS-0015 valid to 05.03.2029

Statement

Based on the verification process, bio.inspecta AG states that the quantification of CO2 Removal achieved in this facility is found compliant with the requirements in standard Puro.earth CO2 Removal Marketplace General Rules 3.0 – and Annex A: Biochar Methodology.

Records and data files have been produced and updated in a reliable way to assess the eligibility and validate the quantification of the CO2 Removal achieved by production of Biochar.

Carbon Dioxide removal eligible for CORCs:
P500: 2,067 tCO2e per 1 ton of biochar (moisture 0%); Production period: 01.09.2022 – 31.08.2023
Pyrodry: 1,680 tCO2e per 1 ton of biochar (moisture 0%); Production period: 01.09.2023 – 19.12.2023
CO2 removal type: Biochar
Production Facility Name: Sonnenerde GmbH
Location: Oberwarter Strasse 100, 7422 Riedlingsdorf, Austria
ID-Number: PE-70402
Inspection report: puro.earth_bio.inspecta_Validation Report_Sonnenerde_06.03.2024

The verification was conducted by bio.inspecta AG with a reasonable level of assurance.
An audit is based on the verification of available information and on the selective testing of the information being examined. Due to this it is possible that fraud, error or non-compliances may occur but not be detected. The final conclusion in the statements has been formed on the basis mentioned above.

Frick, 06.03.2024

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CORC= CO2 removal certificate, t= metric ton, CO2e= Carbon dioxide equivalent amount of greenhouse gas

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CORC Calculation for Biochar 01.09.2023 - 19.12.2023

Net carbon sequestration over 100 years CORCs= E_{stored}-$E_{biomass}$-$E_{production}$-E_{use}

Complete the sections on the yellow background

Shipped eligible production volume	tn	143,09		
Bulk Density	kg/m³	516,00	Carbon over dry weight of biochar.	AR-23-FR-059763-01
Moisture content of sample	%	29,80 %		AR-23-FR-059763-01
$Q_{biochar}$	dry metric tonnes	100,449		
C_{Org}	w-%	49,30 %	The organic carbon content of the biochar produced.	AR-23-FR-059763-01
H	w-%	0,40 %		AR-23-FR-059763-01
TH	years	100	Time horizon, 100 years	
Soil Temperature Ts	°C	14,9	Please provide the annual average soil temperature in the region where biochar is	
Molar H/C_{org} ratio	%	0,13	The permanence factor of biochar organic carbon over a given time horizon *TH* in a given	LCA
$Fp^{TH,Ts}$	%	96,19 %	The permanence factor of biochar organic carbon over a given time horizon *TH* in a given	
Ratio between the molar mass of carbon dioxide and the molar mass of carbon	44/12	3,67		
E_{stored}	**mt CO2 eq / mt biochar (dry)**	**1,739**	Biochar carbon storage	
GHG emissions from biomass cultivation and harvesting	mt CO2 eq / mt biochar (dry)			Please reference LCA (stage A1)
GHG emissions from direct land use change	mt CO2 eq / mt biochar (dry)		In many cases, direct land use changes are given a null value (0 emission from changes in	
GHG emissions from transport of the biomass from the harvest site to the biochar production site	mt CO2 eq / mt biochar (dry)	0,002		Please reference LCA (stage A2)
$E_{biomass}$	**mt CO2 eq / mt biochar (dry)**	**0,002**	Biomass production and supply	
GHG emissions from biochar production process	mt CO2 eq / mt biochar (dry)	0,022		Please reference LCA (stage A3: Pyrolysis, electricity, fuel oil, packaging)
$E_{production}$	**mt CO2 eq / mt biochar (dry)**	**0,022**	Biochar production	
GHG emissions from distribution of biochar to the point of final use	mt CO2 eq / mt biochar (dry)	0,017	In many cases, direct land use changes are given a null value (0 emission from changes in	Please reference LCA (stage A4)
Use of the biochar, including its application	mt CO2 eq / mt biochar (dry)	0,018		Please reference LCA (stage B1)
E_{use}	**mt CO2 eq / mt biochar (dry)**	**0,035**	Biochar use: expected biochar use, to the extent that it is known by the biochar producer. This term should include at least all greenhouse gas emissions from the	
CORC FACTOR (net carbon sequestration over 100 years)	**mt CO2 eq / mt biochar (dry)**	**1,680**		
Total number of CORCs	**CORCs**	**168,76**		