#### bio.inspecta AG q.inspecta AG

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# Audit Report 2023

In accordance with the following requirements:

Puro.earth - Biochar Methodology

Sylva Fertilis France 61200 Argentan Operator's No.: PE-71029

#### **Contact details operator**

#### Name and address

Sylva Fertilis France 2 Route de Sees FR-61200 Argentan

#### Phone/Fax

 Fixnet:
 +33 233774737

 Mobile:

 Fax:

 Email:
 C.Gosset@slbsa.com

#### Contact person(s)

Mr. Cyprien Gosset

#### Audit visit details

#### Date

03.11.2023

**Duration** 1 h 0 m

#### Persons present including their function

Carine Coat, Process Engineer

Cyprien Gosset, Environment Engineer

Mathias Börjesson, bio.inspecta AG, Auditor

	very good			not satisfactory			tory
Clarity of documentation	X						
Audit visit preparation:	X						



		1	Audit Description
X		1.01	Audited Standard:
			Puro.earth CO2 Removal Marketplace General Rules 3.0 – Biochar Methodology (Annex A)
$\mathbf{X}$		1.02	Type of Audit:
			<i>Production Facility Audit and Output Audit Output Audit</i>
X		1.03	Auditing Body:
			bio.inspecta, Ackerstrasse 117, CH-5070 Frick www.bio-inspecta.ch
X		1.04	Audit order assigned to an impartial auditor, free from any conflicts of interest, capable and qualified to complete this audit according to Puro Standard.
			Auditor (name/surname): Mathias Börjesson
X		1.05	Audit ID:
			PE-71029
X		1.06	Audit Date:
			2 Nov 2023
X		1.07	Production Facility Location:
			2 Rte de Sées, 61200 Argentan, France
$\mathbf{X}$		1.08	Production period:
			Sep 2022 - Aug 2023
X		1.09	Audit could be finished within the scheduled time frame
		2	Standing Data Confirmation
X		2.01	The standing data has been collected from Puro and checked for consistency against other evidence. (GL Ref.1.2.5.)
			Data collected of Accend



		3	Evidence Confirmation
X		3.01	All necessary evidence has been provided to the auditor by the Production facility and has been used to complete the compliance checklist. (GL Ref. 5.)
			LCA package available
		4	Eligibility Checklist
X		4.01	Biochar is used in applications other than energy. (GL Ref. 1.1.1.)
			Only used as soil improvemnt
×		4.02	Biochar is produced from sustainable forest or waste biomass raw materials (consult positive list of biomasses). (GL Ref. 1.1.2) wood pellet SBP certified, sourced from PEFC certified forests
X		4.04	Pyrolysis reactor input fuel for heating is not a fossil fuel. Unless only used for ignition/pre heating or in a mobile unit and the emissions are fully included in the LCA. The use of waste heat from other industrial processess (eg. Biodigesters, cement production) is permitted. (GL Ref. 1.1.4.)
			"bonnfire" made of wood heat up the process
X		4.05	Pyrolysis gases are combusted or recovered. Bio-oil and pyrolysis gases can be stored for later use as renewable energy or materials. (GL Ref. 1.1.5.)
			All process-gas are combusted
X		4.06	The molar H/Corg ratio is less than 0.7.
			0,19
X		4.07	Evidence of safe handling and transport is provided and adequate for the production facility. (GL Ref. 1.1.7.)
		5	LCA Checklist



		5	LCA Checklist
X		5.01	LCA complete and shows: carbon footprint of the biomass production and supply , emissions from the biochar production process , carbon footprint of the biochar end use - cradle to grave. (GL Ref. 1.1.3)
			See attached LCA Calculation Sylva Fertilis
X		5.02	The CO2 Removal Supplier provides a life cycle assessment (LCA) for biochar activity including disaggregated information on the emissions arising at different stages. The system boundary is set cradle-to-grave and includes emissions from production and supply of the biomass, from biomass conversion to biochar, and from biochar distribution and use. (GL Ref. 3.1)
			Accend makes according to me the most complete LCA
X		5.03	Life cycle assessment (LCA) follows ISO standard, WRI GHG protocol or similar method. (GL Ref. 3.2)
X		5.04	The default baseline emission scenario for the project activity feedstock is zero, which is a conservative assumption since it is not taking into account methane emissions derived from decay of manure or combustion of waste biomass. If a non-zero baseline presented, needs to be accepted by Puro.earth
		6	Production Facility Checklist (Desktop and Verbal Confirmation).
X		6.01	Evidence of Production Facility eligibility under the general rules of Puro Standard. (GL Ref. 1.2.1)
			Nice and well planned facility for biochar production
		6.02	The Production Facility demonstrate Environmental and Social Safeguards. (GL Ref. 1.2.2.) Yes



		6	Production Facility Checklist (Desktop and Verbal Confirmation).
X		6.03	CO2 Removal Supplier shall be able to demonstrate additionality, meaning that the project must convincingly demonstrate that the CO2 removals are a result of carbon finance. Even with substantial non-carbon finance support, projects can be additional if investment is required, risk is present, and/or human capital must be developed. To demonstrate additionality, CO2 removal Supplier must provide full project financials and counterfactual analysis based on Baselines that shall be project-specific, conservative and periodically updated. Suppliers must also show that the project is not required by existing laws, regulations, or other binding obligations. (GL Ref. 1.2.3) <i>True</i>
X		6.04	The Production Facility's documentation system is accurate and reliable (GL Ref. 1.2.4) <i>Carine Coats are making a great job with all kind of documentation.</i>
			One of the best documentation I seen
X		6.05	The quantity of the biochar produced and sold is quantified and documented in a reliable manner (GL Ref. 1.2.4) 86 ton produced and 91 ton sold
X		6.06	Relevant meters are in place and they are calibrated (GL Ref. 1.2.4) Heat and electricity meters available
X		6.07	The emissions from the cultivating, harvesting and transporting of the biomass are estimated and calculated in a reliable manner (GL Ref 1.2.4)
X		6.08	The energy use of the Production Facility can be quantified and the emissions from the process calculated (GL Ref. 1.2.4) See emission_report and LCA calculation Sylva Fertilis
X		6.09	The auditor goes through the Quantification of CO2 Removal requirements with the CO2 Removal Supplier, so that the Supplier is able to calculate the CO2 Removal independently in its Output Report
		-	Looks good and correct
		7	Calculation Checklist



		7	Calculation Checklist
X		7.01	Qbiochar = Quantity of biochar produced and sold to end user. (dry char) (GL Ref. 4.2.)
			Comment: 91ton
X		7.02	$FpTHTs = c + m \times H/Corg (GL Ref. 4.2.)$
			Comment: 0.961505486
X		7.03	C Biochar = carbon content of biochar (GL Ref. 4.2.)
			Comment: 94,8
X		7.04	Estored = biochar carbon storage = Qbiochar x Cbiocharorg x FpTHTs x $44/12$ (GL Ref. 4.2.)
			Comment: 3,34
X		7.05	Ebiomass = LCA emissions of production and supply of biomass (GL Ref. 4.3.)
			Comment: Emission from production of biomass is 172 kg CO2e/t dry biochar produced, and the supply of biomass is 168kg CO2e/t dry biochar produced.
X		7.06	Eproduction = LCA emissions from biochar manufacturing (GL Ref. 4.4)
			<i>Comment: Emission from manufacturing of biochar is 6 kg CO2e/t dry biochar produced</i>
X		7.07	Euse = LCA emissions of the use of biochar, including distribution up to the point of final use (GL Ref $4.5$ )
			<i>Comment: Emission from the use of biochar is 1 kg CO2e/t dry biochar produced, and the transport to the customer is 60kg CO2e/t dry biochar produced.</i>
X		7.08	CORCs = Estored - Ebiomass - Eproduction - Euse
X		7.09	Quantity of CORCs (in evidence).
			<i>Comment: Total CORCs under the period Sep -22 and Aug -23 are 250tonnes CO2</i>



		7	Calculation Checklist
$\boxtimes$		7.10	Confirm consistency.
			Comment: seems ok
		9	Overall conclusion
X		<b>9</b> 9.01	Overall conclusion:

# Auditor's evaluation and recommendation

Non-compliance	Corrective action	Deadline
Puro.earth - Biochar Methodology		
None		

#### The Right to be Heard

The undersigned has reviewed the outcome of the audit documented in this report and confirms the completeness and accuracy of the information provided in the audit and the content of this report.

He/ she has taken note of the non-conformities, measures, deadlines and sanctions described in this report.

The undersigned has the option of submitting a counter-notification in writing to bio.inspecta AG within three working days of receipt of this report. If no reply is received within this period, the contents of this report shall be deemed to be acknowledged.

Frick, 18.12.2023

Argentan,

bio.inspecta AG / q.inspecta GmbH International Department Sylva Fertilis France

Muhi

Mathias Börjesson

Auditor

name, first name	
function	