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Audit Report 2023

In accordance with the following requirements:

Puro.earth - Biochar Methodology

Explocom GK SRL
537165 Lupeni Jud-Harghita
Operator's No.: PE-70804

Contact details operator

Name and address

Explocom GK SRL
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Contact person(s)

Mr. Paul Ferguson

Audit visit details

Date
18.12.2023

Duration
1 h 0 m

Persons present including their function
Fazakas Karoly, Production Manager
Mathias Börjesson, bio.inspecta AG, Auditor

	very good						not satisfactory
Clarity of documentation	☐	☒	☐	☐	☐	☐	☐
Audit visit preparation:	☐	☒	☐	☐	☐	☐	☐

O.K | Corrective action required | Not verified | Not relevant

Puro.earth - Biochar Methodology

				1	**Audit Description**
☒	☐	☐	☐	1.01	Audited Standard: *Puro.earth CO2 Removal Marketplace General Rules 3.0 – Biochar Methodology (Annex A)*
☒	☐	☐	☐	1.02	Type of Audit: *Output Audit*
☒	☐	☐	☐	1.03	Auditing Body: *bio.inspecta AG, Ackerstrasse 117, CH-5070 Frick* *www.bio-inspecta.ch*
☒	☐	☐	☐	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*
☒	☐	☐	☐	1.05	Audit ID: *?*
☒	☐	☐	☐	1.06	Audit Date: *EBC Inspection 21 Nov-23. Remote inspection 18 Dec -23*
☒	☐	☐	☐	1.07	Production Facility Location: *Filias 102/D, 535400 Cristuru Securesc*
☒	☐	☐	☐	1.08	Production period: *Jan 2022 - June 2023*
☒	☐	☐	☐	1.09	Audit could be finished within the scheduled time frame *Audit could be finished within the scheduled time frame, but more time needs to be allocated in future. Audit time should be extended by 0 h, because: All good*
				2	**Standing Data Confirmation**

O.K | Corrective action required | Not verified | Not relevant

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O.K	Corrective action required	Not verified	Not relevant		
				2	**Standing Data Confirmation**
☒	☐	☐	☐	2.01	The standing data has been collected from Puro and checked for consistency against other evidence. (GL Ref.1.2.5.) *Comment: The data from Accend has been checked and seems correct*
				3	**Evidence Confirmation**
☒	☐	☐	☐	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.) *Comment: The complete auditpackage are available*
				4	**Eligibility Checklist**
☒	☐	☐	☐	4.01	Biochar is used in applications other than energy. (GL Ref. 1.1.1.) *Used as fertiliser or soil improvement*
☒	☐	☐	☐	4.02	Biochar is produced from sustainable forest or waste biomass raw materials (consult positive list of biomasses). (GL Ref. 1.1.2) *F-02 firewood*
☒	☐	☐	☐	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.) *Firewood starts the process*
☒	☐	☐	☐	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.) *Pyrolysis gas are getting burnt and some are condensed as wood vinegar*
☒	☐	☐	☐	4.06	The molar H/Corg ratio is less than 0.7. *The time period includes two analysis. H/C molar 0,29 and 0,27 which make the average 0,28*

O.K | Corrective action required | Not verified | Not relevant

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				4	**Eligibility Checklist**
☒	☐	☐	☐	4.07	The biochar produced meets any product quality requirements existing in the jurisdiction where biochar is used and for the specific applications considered (GL Ref 1.1.7).
☒	☐	☐	☐	4.08	Evidence of safe handling and transport is provided and adequate for the production facility. (GL Ref. 1.1.8.) *The biochar getting cooled down and water are added to make the handling safe*
				5	**LCA Checklist**
☒	☐	☐	☐	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) *Comment: See LCA calculation and audit package*
☒	☐	☐	☐	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)
☒	☐	☐	☐	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
☒	☐	☐	☐	5.03	Life cycle assessment (LCA) follows ISO standard, WRI GHG protocol or similar method. (GL Ref. 3.2)
				6	**Production Facility Checklist (Desktop and Verbal Confirmation).**
☒	☐	☐	☐	6.01	Evidence of Production Facility eligibility under the general rules of Puro Standard. (GL Ref. 1.2.1) *Comment: The Facility exist as its described*

O.K | Corrective action required | Not verified | Not relevant

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				6	**Production Facility Checklist (Desktop and Verbal Confirmation).**
☐	☒	☐	☐	6.02	The Production Facility demonstrate Environmental and Social Safeguards. (GL Ref. 1.2.2.) *Comment: Some of the areas where the biochar getting processed and stored are really dusty*
☒	☐	☐	☐	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) *Comment: The supplier has good carbon financial knowledge*
☒	☐	☐	☐	6.04	The Production Facility's documentation system is accurate and reliable (GL Ref. 1.2.4) *Comment: Good documentation*
☒	☐	☐	☐	6.05	The quantity of the biochar produced and sold is quantified and documented in a reliable manner (GL Ref. 1.2.4) *Comment: 146 ton produced and 146 ton sold. No bigger storage on visit so reliable numbers*
☐	☒	☐	☐	6.06	Relevant meters are in place and they are calibrated (GL Ref. 1.2.4) *Comment: There only meters are the electric companys invoices*
☒	☐	☐	☐	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) *Comment: The address of Flex Cont SRL are confimed*
☒	☐	☐	☐	6.08	The energy use of the Production Facility can be quantified and the emissions from the process calculated (GL Ref. 1.2.4) *Comment:The calculation of production are well made*

O.K | Corrective action required | Not verified | Not relevant

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				6	**Production Facility Checklist (Desktop and Verbal Confirmation).**
☒	☐	☐	☐	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 *Comment:They have good knowledge*
				7	**Calculation Checklist**
☒	☐	☐	☐	7.01	Qbiochar = Quantity of biochar produced and sold to end user. (dry char) (GL Ref. 4.2.) *Comment: 146 ton produced and sold*
☒	☐	☐	☐	7.02	FpTHTs = c + m x H/Corg (GL Ref. 4.2.) *Comment: C=1.10 , m=(-0,59) , H/Corg=0,28 , FpTHTs=93%*
☒	☐	☐	☐	7.03	C Biochar = carbon content of biochar (GL Ref. 4.2.) *Comment: 83% carbon content in average*
☒	☐	☐	☐	7.04	Estored = biochar carbon storage = Qbiochar x Cbiocharorg x FpTHTs x 44/12 (GL Ref. 4.2.)
☒	☐	☐	☐	7.05	Ebiomass = LCA emissions of production and supply of biomass (GL Ref. 4.3.) *Comment: Emissions related to the transport amount 0.11 kg per CO2e per tonne of dry biochar. Emissions related to the materials used for the biochar amount to 5 kg CO2e per tonne of dry biochar.*
☒	☐	☐	☐	7.06	Eproduction = LCA emissions from biochar manufacturing (GL Ref. 4.4) *Comment: Emissions from the production process of the biochar are limited to electricity, diesel and exhaust emissions from the process. Electricity = 119 kg of CO2e per tonne of dry biochar, Diesel = 139 kg CO2e per tonne of dry biochar, Exaust emission = 16 kg CO2e/tonne of dry biochar produced. In total, emissions of greenhouse gases related to the manufacturing phase of the biochar amount to 274 kg CO2e per tonne of dry biochar. Additional GHG emissions related to the infrastructure used for the period assessed are 49 kg CO2e/tonne of dry biochar produced*

O.K | Corrective action required | Not verified | Not relevant

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				7	**Calculation Checklist**
☒	☐	☐	☐	7.07	Euse = LCA emissions of the use of biochar, including distribution up to the point of final use (GL Ref 4.5) *Comment: Total biochar transport emissions (Module A4), including the biochar and packaging mass, are 48 kg CO2e per tonne of dry biochar transported. The biochar application emissions are estimated to be 4 kg CO2e/tonne dry biochar.*
☒	☐	☐	☐	7.08	CORCs = Estored - Ebiomass - Eproduction - Euse *Comment: See attached LCA calculation CORCs: 353*
☒	☐	☐	☐	7.09	Quantity of CORCs (in evidence). *Comment:See attached LCA calculation CORCs: 353*
☒	☐	☐	☐	7.10	Confirm consistency. *Comment: LCA made by Accend. Good consistency*
				9	**Overall conclusion**
☒	☐	☐	☐	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, 27.12.2023	Lupeni Jud-Harghita, ...
bio.inspecta AG / q.inspecta GmbH International Department	Explocom GK SRL
	.....
Mathias Börjesson	name, first name.....
Auditor	function.....