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Audit Report 2023

In accordance with the following requirements:

Puro.earth - Biochar Methodology

Carbon Hill Limited
SY219DJ Welshpool
Operator's No.: PE-71064

Contact details operator

Name and address

Carbon Hill Limited
Caebardd, Guilsfield
GB-SY219DJ Welshpool

Phone/Fax

Fixnet: +44 1938 500283
Mobile: -
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Email: mick@woodtekeng.co.uk

Contact person(s)

Mr. Mick Jones

Audit visit details

Date
07.11.2023

Duration
4 h 0 m

Persons present including their function
Mick Jones, Production Manager
Kim Jones, Project Manager
Mathias Börjesson, bio.inspecta AG, Auditor

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

Puro.earth - Biochar Methodology

O.K	Corrective action required	Not verified	Not relevant		
				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: *PE-71064*
☒	☐	☐	☐	1.06	Audit Date: *7 November 2023*
☒	☐	☐	☐	1.07	Production Facility Location: *Cae Bardd Guilsfield Welshpool SY219DJ United Kingdom*
☒	☐	☐	☐	1.08	Production period: *September 2022 - August 2023*
☒	☐	☐	☐	1.09	Audit could be finished within the scheduled time frame
				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: See audit package*

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O.K	Corrective action required	Not verified	Not relevant		
				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.)
				4	**Eligibility Checklist**
☒	☐	☐	☐	4.01	Biochar is used in applications other than energy. (GL Ref. 1.1.1.) *Only soil improvment*
☒	☐	☐	☐	4.02	Biochar is produced from sustainable forest or waste biomass raw materials (consult positive list of biomasses). (GL Ref. 1.1.2) *F02*
☒	☐	☐	☐	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.) *Fire up a pile of firewood*
☒	☐	☐	☐	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.) *Fully combusted*
☒	☐	☐	☐	4.06	The molar H/Corg ratio is less than 0.7. *0.11*
☒	☐	☐	☐	4.07	Evidence of safe handling and transport is provided and adequate for the production facility. (GL Ref. 1.1.7.) *65% moist*
				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 Carbon Hill*

Puro.earth - Biochar Methodology

O.K	Corrective action required	Not verified	Not relevant		
				5	**LCA Checklist**
☒	☐	☐	☐	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)
☒	☐	☐	☐	5.03	Life cycle assessment (LCA) follows ISO standard, WRI GHG protocol or similar method. (GL Ref. 3.2) *Accend are using correct method*
☐	☐	☐	☒	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).**
☒	☐	☐	☐	6.01	Evidence of Production Facility eligibility under the general rules of Puro Standard. (GL Ref. 1.2.1) *Comment: Nice production facility that are doing this the right way*
☒	☐	☐	☐	6.02	The Production Facility demonstrate Environmental and Social Safeguards. (GL Ref. 1.2.2.) *Comment: yes*
☒	☐	☐	☐	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)
☒	☐	☐	☐	6.04	The Production Facility's documentation system is accurate and reliable (GL Ref. 1.2.4)

O.K	Corrective action required	Not verified	Not relevant		
				6	**Production Facility Checklist (Desktop and Verbal Confirmation).**
☒	☐	☐	☐	6.05	The quantity of the biochar produced and sold is quantified and documented in a reliable manner (GL Ref. 1.2.4) *Comment:yes see LCA calculation Carbon Hill*
☒	☐	☐	☐	6.06	Relevant meters are in place and they are calibrated (GL Ref. 1.2.4)
☒	☐	☐	☐	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: Yes it is Accend and they dont miss anything*
☒	☐	☐	☐	6.08	The energy use of the Production Facility can be quantified and the emissions from the process calculated (GL Ref. 1.2.4)
☒	☐	☐	☐	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
				7	**Calculation Checklist**
☒	☐	☐	☐	7.01	Qbiochar = Quantity of biochar produced and sold to end user. (dry char) (GL Ref. 4.2.) *Comment: 201ton*
☒	☐	☐	☐	7.02	FpTHTs = c + m x H/Corg (GL Ref. 4.2.) *Comment: 1*
☒	☐	☐	☐	7.03	C Biochar = carbon content of biochar (GL Ref. 4.2.) *Comment: 77%*
☒	☐	☐	☐	7.04	Estored = biochar carbon storage = Qbiochar x Cbiocharorg x FpTHTs x 44/12 (GL Ref. 4.2.) *Comment: See LCA calculation Carbon Hill*
☒	☐	☐	☐	7.05	Ebiomass = LCA emissions of production and supply of biomass (GL Ref. 4.3.) *Comment: see LCA calculations Carbon hill*

Puro.earth - Biochar Methodology

O.K	Corrective action required	Not verified	Not relevant		
				7	**Calculation Checklist**
☒	☐	☐	☐	7.06	Eproduction = LCA emissions from biochar manufacturing (GL Ref. 4.4) *Comment: 45ton*
☒	☐	☐	☐	7.07	Euse = LCA emissions of the use of biochar, including distribution up to the point of final use (GL Ref 4.5) *Comment: 1+19=20 ton*
☒	☐	☐	☐	7.08	CORCs = Estored - Ebiomass - Eproduction - Euse *Comment: See LCA calculation CORCs: 484ton*
☒	☐	☐	☐	7.09	Quantity of CORCs (in evidence). *Comment: See LCA calcualtion file CORCs: 484*
☒	☐	☐	☐	7.10	Confirm consistency. *Comment: OK*
				9	**Overall conclusion**
☒	☐	☐	☐	9.01	Overall conclusion: *Carbon Hill are a serious producer and are using Accend for the LCA. Good combination*

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, 07.12.2023

bio.inspecta AG / q.inspecta GmbH
International Department

Mathias Börjesson

Auditor

Welshpool, ...

Carbon Hill Limited

.....

name, first name.....

function.....