COMBINED FACILITY AND OUTPUT AUDIT REPORT

KEY PROJECT INFORMATION		
REPORT ID	PE.VAL.24.17	
REPORT TITLE	Nian'da Biochar Facility combined facility and output audit report	
REPORT DATE	25/03/2025	
VERSION NO	1.0	
CO_2 REMOVAL SUPPLIER	Miao Ying Ling Tan Information & Technology (Beijing) Co., Ltd.	
FACILITY OPERATOR	NANJING NIAN'DA ENVIRONMENTAL TECHNOLOGY CO., LTD.	
PRODUCTION FACILITY NAME	Nian'da Biochar Facility	
PRODUCTION FACILITY ADDRESSES	Dazhoudi, Dapeng Village, Longtan Street, Qixia District, Nanjing	
PRODUCTION FACILITY ID	577494	
PRODUCTION FACILITY COORDINATES	Latitude: 32.20939 Longitude: 119.16278	
REMOVAL PERIOD	08/08/2023 to 31/05/2024	
CO_2 SINK SECTOR	Biochar	
APPLIED METHODOLOGY	Biochar Methodology Edition 2022, v3.0	
PURO.EARTH STANDARD VERSION	Puro Standard General Rules Version 4.0.	
NET VOLUME OF CO_2 REMOVAL	330.96 CORCs	
CLIENT	Puro. earth	
PREPARED BY	Earthood Services Limited	
APPROVED BY	 Dr. Kaviraj Singh	
WORK CARRIED OUT BY	Team Leader & Methodology Expert Validator/Verifier Technical Reviewer & Methodology Expert	Mehr Munjal Mohd Aamir Khan Anjali Chaudhary

Earthood

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1. INTRODUCTION

Earthood Services Limited (formerly known as Earthood Services Private Limited) was contracted by Puro.earth to undertake a joint production facility and output facility audit for the project facility "Nian'da Biochar Facility" to verify the CO_2 removal claims for the period spanning from 08/08/2023 to 31/05/2024. This report summarizes the results and conclusions of the production and output audit performed as a formal part of the Puro.earth certification process. Earthood declares that they are an impartial auditor, free from any conflicts of interest, capable, and qualified to complete this audit according to Puro Standard and related Validation and Verification Body Requirements.

The Nian'da biochar project is a green initiative located in the Dazhoudi, Dapeng Village, Longtan Street, Qixia District, China as verified during on the on site audit/42/. The biochar production facility utilizes agricultural waste straw as feedstock processed to biochar which is sourced from Dapeng village farmland as confirmed from the signed attestation for providing rapeseed straw, wheat straw and bean straw to Nanjing Nian'da Environmental Technology Co., Ltd/36/. The Biochar is formed through pyrolysis under oxygen limited conditions i.e hypoxia. The Nian'da biochar facility consists of a rotary kiln furnace manufactured by Nanjing Nian'da Environmental Technology Co., Ltd which operates continuously, with a feed capacity of 600 kg per hour and production capacity of 0.2 tonnes of dry weight biochar per hour. This is validated through the production equipment questionnaire/21/ and the mass and energy balance of the production process/22/. The resultant biochar is then applied to neighbouring farmland which was observed during the on-site assessment/42/

The facility operator has rented 14.4 ha of farmland from the Dapeng Village Shareholding Economic Cooperative (Longtan Street, Qixia District, Nanjing) around the facility as verified from the accounting voucher for the leased farmland, dated 31/01/2023/14/ and is planning to produce 1080 tons of biochar per year to fix an estimated 1500 tons of CO_2 for over a period of 100 years. The current project activity aims to aid local governments efforts in sustainable management of agricultural waste particularly straw and simultaneously enhancing crop productivity and mitigating climate change.

1.1 OBJECTIVES

The objective of this audit is to conduct a third-party assessment of the operational and administrative processes of the production facility, as well as the output generated, and CO_2 removals achieved during the period from 08/08/2023 to 31/05/2024. The assessment verifies

compliance of all project documentation and supporting materials with the rules and requirements of the Puro Standard General Rules Version 4.0. In particular,

- Project conformance to the applied biochar methodology Edition 2022 v3.0.
- Life Cycle Assessment (LCA) Report and CORC calculation
- Uncertainty and Reversal risk estimation
- Monitoring and Reporting Plan
- Additionality Assessment Report
- Stakeholder Consultation
- Environmental and Social Safeguards.
- Project Description

1.2 LEVEL OF ASSURANCE

☒ Reasonable Level of assurance

☐ Limited Level of assurance

Earthood's verification approach is based on understanding the risks associated with reporting GHG emissions data and the controls in place to mitigate these risks. Earthood's plan for the validation process involved obtaining the necessary evidence, information, and explanations to provide a reasonable level of assurance. The VVB reviewed sufficient evidence to verify the project implementation, data, parameters, and emission reduction calculations for this monitoring period. Any discrepancies found during the verification assessment were raised as audit findings and successfully resolved. All audit findings are included in Appendix 2 of this report.

During the current facility and output audit, the VVB conducted an on-site audit of the project activity, as detailed in Section 2, and observed no substantial changes, thus meeting a reasonable level of assurance.

1.3 AUDIT TEAM

The audit involved a desk review of the relevant documentation, on-site visit(s), and technical review. The personnel employed and their roles in this assessment were as follows. The assessment team's qualifications are attached as Appendix 3.

Roles allocated to the assessment team		
Role	**Name**	**Nature of involvement**

		Desk Review	On Site Visit	Reporting	Supervision	Technical Review
Team Leader & Methodology Expert	Mehr Munjal	Y	Y	Y	Y	-
Validator/Verifier	Dr. Mohd Aamir Khan	Y	N	Y	Y	
Technical Reviewer & Methodology Expert	Anjali Chaudhary	-	-	-	-	Y

2 AUDIT PROCESS

A planned series of audit activities were conducted during the on-site audit to independently validate and verify facility operations, production, and output data, and CORC Claims. The on-site audit was conducted following the specifications of Puro Standard General Rules version 4.0 and the Puro Biochar Methodology Edition 2022 version 3. Specific audit activities conducted are summarized below. A completed Puro Biochar Methodology Compliance Checklist used during the audit is attached to this report as Appendix 1.

1. **Opening meeting**:
    a. Conducted an initial meeting to outline the audit objectives, scope, and methodology.
    b. Reviewed key operational measurement points and instrumentation used in the facility.
    c. Review of ownership details, roles and responsibilities of the removal suppliers.
2. **System Inputs and Outputs Review:**
    a. Examined the inputs (biomass feedstock) and outputs (biochar) of the production system.
    b. Verified the accuracy and consistency of input and output data.
3. **Records Examination**:
    a. Inspected records related to the receipt of feedstock, including delivery slips and inventory logs.
    b. Reviewed production logs detailing the daily operation of the kilns and production outputs.
    c. Assessed the utilization and maintenance records of the equipment used in production.
4. **Data Collection and Material Handling Procedures:**

a. Evaluated data collection methods and tools to ensure accurate tracking of production metrics.
b. Observed material handling procedures to ensure compliance with operational standards and efficiency.

5. **Equipment and Calibration Review:**
   a. Checked the calibration records for all measurement instruments and equipment used in the production process.
   b. Ensured that all equipment was properly maintained and functioning correctly.
6. **Safety and Social Security Arrangements:**
   a. Assessed the safety measures in place at the production facility, including worker safety protocols and emergency procedures.
   b. Reviewed social security arrangements for employees to ensure compliance with local regulations and standards.
   c. Interview with local stakeholder to confirm the engagement process and ongoing grievance mechanisms.
7. **Compliance Checklist:**
   a. Used the Puro Biochar Methodology Compliance Checklist to systematically verify adherence to the specified standards.
   b. Documented findings and ensured all criteria were met, with any discrepancies noted and addressed.
8. **CORC Claims Verification:**
   a. Independently validated and verified the facility's CO_2 Removal Certificates (CORCs) claims.
   b. Cross-checked CORC claims against the production and output data to ensure accuracy and legitimacy.

These activities collectively ensured a comprehensive audit of the biochar production plant, validating its operations, data integrity, and compliance with the Puro Biochar Methodology version 3.0. The completed Puro Biochar Methodology Compliance Checklist is attached to this report as Appendix 1.

List of Interview conducted during on-site audit are as follows.

S. No	Interviewee			Date	Team member(s)
	Last Name	First Name	Affiliation		
1.	Hai	Jack	Miotech		
2.	Liu	Guoqiang	Miotech		

3.	Wang	Qi	Miotech	12/03/2025	Mehr Munjal
4.	Cong	Yaowei	Miotech		
5.	Tao	Shengnian	Nian'da		
6.	Zhang	Jinxing	Nian'da		
7.	Ma	Jiangbin	Nian'da		
8.	Ma	Lifang	Nian'da		
9.	Wang	Biao	Local stakeholder (farmer)		
10.	Zhu	Yulong	Local stakeholder (farmer)		
11.	Zhou	Jianbin	Local stakeholder (Nanjing Forestry University professor)		

3 RESOLUTION OF FINDINGS

The process for raising the findings (corrective actions, non-conformities, or other findings) by the assessment team was carried out during the desk review phase and from the site visit observations and discussions. As an outcome of the audit process, the assessment team can raise different types of findings according to the following understanding:

1. A clarification request (CL) is raised where information is insufficient or not clear enough to determine whether the applicable requirements of the registry have been met.
2. When a non-conformance arises, the team leader raises a Corrective Action Request (CAR). CAR is issued, where:
    a. The project participant made mistakes that would influence the ability of the project activity to achieve real, measurable, and additional emissions reduction.
    b. The standard and methodology requirements have not been met; there is a risk that emissions reductions cannot be monitored or calculated.
    c. The auditing process may be halted until this information is made available to the team leader's satisfaction. Information or clarification provided as a result of CL may also lead to CAR.

3. A Forward Action Request (FAR) will be raised when certain issues related to project implementation are reviewed during the following validation/verification assessment.

During the combined Production Facility Audit and Output Audit, a total of 02 CLs and 03 CARs were raised and resolved satisfactorily. The list of CARs/CLs raised, and the responses provided, means of verification, reasons for their closure, and references to corrections in the relevant documents are provided in Appendix 2 of this report. No FAR was raised during this assessment.

4 PRODUCTION STANDING DATA

GENERAL INFORMATION	
Production Facility Name	Nian'da Biochar Facility
Facility ID	577494
CO_2 Removal Supplier registering the production facility	Miao Ying Ling Tan Information & Technology (Beijing) Co., Ltd.
Facility Operator	NANJING NIAN'DA ENVIRONMENTAL TECHNOLOGY CO., LTD 91320113MA20K7Q12L
Location	Dazhoudi, Dapeng Village, Longtan Street, Qixia District, Nanjing
Verified CORC Factor	1.44 CORCs per ton biochar
Verified CORCs for the reporting period from 08/08/2023 to 31/05/2024	330.96-ton CO_2 eq CORCS
Removal Methodology for which the plant is eligible to receive CORCs	Biochar Methodology Edition 2022 V3
Production facility has benefitted from public funding	No
Removal method specific information as may be specified in the relevant removal method methodology	Biochar, Pyrolysis Process

5 QUANTIFICATION OF CO_2 REMOVAL

INPUT	VERIFIED RATE	UNIT	NOTES (Specifications, source, etc)

Biomass supply inputs (collection, handling, transportation emissions), ($E_{biomass}$)	0.89	tonne CO_2-eq	Emissions are from transport of biomass from source to kiln site. Verified average transport distance is within 3.1 km, from the route map depicting the starting point and end point. The same has been verified during on-site audit./42/ Cultivation and harvesting emissions are considered 0 t CO_2 as the biomass feedstock is an agricultural residue whichis harvested by hand from the local farmland, as verified from the LCA report and on-site audit as well as interviews/42/
Production and operation emissions output ($E_{production}$)	57.73	tonne CO_2-eq	Production emissions include all the material and energy inputs including biomass storage, pre-processing, pyrolysis, quenching of biochar, packaging and storage attributable to electricity, liquified petroleum gas, as well as infrastructure related emissions. Calculations are based on "LCA report titled "Life cycle assessment of Nanjing Nian'da Environmental & Technology Co., Ltd's biochar production and use for CORC calculation" conducted by MioTech, dated 25/09/2024/32/
Product distribution emissions output (E_{use})	1.20	tonne CO_2-eq	Biochar deliveries to end use cover transport emissions as well as soil incorporation emissions. The activity data is based on data collected each day based on the vehicles used. Verified through the biochar tracking and fuel log record./33/
E_{stored}	-390.78	tonne CO_2-eq	Dry mass is determined as per the facility protocols and verified by the laboratory analysis results titled "Lab test of report of biochar" prepared by NOA Testing and Inspection Technology Ltd, dated 29/09/2024/38/ The calculation is verified from the "Corc Report Summary_Nian'da Biochar Facility"/40/
Biochar used for which CORCs are claimed	229.36	Dry metric tonnes	The geolocation of the farms where biochar was applied, is recorded in the database, along with images. Also, during the on-site audit/42/ it was verified that biochar was applied for the pilot purposed on the farm leased to facility by Dapeng Village Shareholding Economic Cooperative (Longtan Street, Qixia District, Nanjing), during the current removal period. The amount has been verified from the "Records of biochar

			enduse"/23/ . The bags of biochar at the production facility are weighed with the help of a calibrated electronic weighing scale observed on site. The technical specifications and calibration requirements have been provided by the project developer and found to be appropriate by the assessment team. /29/
CORCs issued	330.96	CORCs	The value is correctly calculated based on the total production of biochar during the reporting period as verified from the biochar production log/34/, and cross checked with the LCA calculation sheet/39/

Formula CORCS = $E_{stored} - E_{biomass} - E_{Production} - E_{use}$		
$E_{biomass}$	0.89/229.36	0.00 tonne CO_2-eq/tonne biochar
$E_{production}$	57.73/229.36	0.25 tonne CO_2-eq/tonne biochar
E_{use}	1.20/229.36	0.01 tonne CO_2-eq/tonne biochar
E_{stored}	-330.96/229.36	-1.70 tonne CO_2-eq/tonne biochar
CORC Factor	338.2/229.36	1.44 CORCs/tonne biochar
H:C_{org}	0.39	

Comparison of CORCs Claimed and Verified CORCs			
Monitoring Period	**CORCs Claimed**	**CORCs Verified**	**Assessment**
08/08/2023 to 31/05/2024	338.32	330.96	The difference in the value of the CORCs originally claimed by the CO2 removal supplier and the actual amount of CORCs verified is due to minor revisions to the input data in the LCA which were raised and resolved during the course of the audit.

6 FINAL OPINION

Based on the assessment team's comprehensive review of the project documentation, thorough site inspection, and subsequent follow-up actions, Earthood Services Limited has gathered sufficient evidence to conclude that the production facility "Nian'da Biochar Facility" meets the requirements outlined in the Puro Standard General Rules Version 4.0. We confirm that the Puro Biochar Methodology Edition 2022 version 3 has been correctly applied for output and CO_2 removal calculation.

The project implementation aligns closely with the information provided in the project documentation, and monitoring procedures adhere to the prescribed methodology. Furthermore, the removals achieved during the current monitoring period have been accurately calculated without significant discrepancies.

Our verification approach is grounded in a deep understanding of the risks associated with reporting GHG emission data and the implementation of controls to mitigate these risks effectively. Based on the evaluated information, we affirm that the emission removals for the reporting period from 08/08/2023 to 31/05/2024, amount to 330.96 CORCs.

Therefore, Earthood Services Limited confirms the production facility's capability to effectively remove CO_2 and requests the issuance of CORCs for the first reporting period.

APPENDIX 1: METHODOLOGY COMPLIANCE CHECKLIST

Methodology Compliance Checklist			
Section 1.1 Eligible activity type			
1.1 Requirements for activities to be eligible under the methodology			Requirement met?
	Verification Method	Verification remarks	
1.1.1 Biochar must be used in applications that preserve its carbon storage property (e.g. greenhouse substrates, surface water barrier, animal feed additive, wastewater treatment, insulation material, landfill/mine absorber, soil additive). Biochar	1. Soil application pictures and videos- Geotagged and time stamped. 2. The amount of biochar applied is verified from the weigh slips generated for each loaded vehicle leaving the plant site. 3. Physical site visit to the site of	The time stamped and geotagged photographs of soil application of biochar/43/ confirm that the biochar is used in application that preserves its carbon storage property. , The soil application of biochar was also observed during the on-site audit and interviews with end-user farmers/42/ which confirms that the biochar is used as soil additive in the farms	Y

must not be used in applications that destroy its carbon storage, e.g. fuel or reductant uses.	application. The biochar is applied as soil additive to the farm leased by the project developer around the production facility./42/ 4. Interviews with end-user farmers/42/	near the production facility. Therefore, the assessment team confirms that the biochar is being used in application that preserve its carbon storage properties.	
1.1.2 Biochar must be produced from sustainable biomass: sustainably sourced biomass, or waste biomass such as agricultural waste, biodegradable waste, urban wood waste or food waste. -In case of agricultural waste sustainable collection means that 30% of residues are left to the field to avoid decreasing soil health and crop levels	1. Evidence against Biomass received provided by the Supplier/37/ 2. A physical site visit to verify the existence of agricultural waste in the region where the production facility is located/42/	Biomass comprising of agricultural waste such as rape seed straw, wheat straw, corn straw and bean straw is sustainably sourced from local farms under authority of Dapeng Village Committee, Longtan Subdistrict. Qixia District as confirmed from the signed attestation provided by Dapeng village for sourcing the biomass/36/ Thus, this qualifies as agricultural waste. Therefore, the assessment team confirms that the biochar is produced from sustainably sourced biomass. The biomass sustainability criteria adheres to the Puro Earth Biomass Sourcing Criteria version 1.0/5/ in terms of the soil quality and carbon stock. The harvesting of the biomass	Y

		residues maintains the quality of the soul and carbon stock. More than 30% of the residues are left to the field to decompose in the soil by the method of adjusted height cutting by the harvester. This was observed on site and be verified from the sustainability evidence document of the source biomass provided by the project developer/37/	
1.1.3. The producer must demonstrate net-negativity with results from a life cycle assessment (LCA) or carbon footprint of the biomass production and supply, the biochar production process, and of the biochar use, including disaggregated information on the emissions arising at different stages and from different greenhouse gases. The LCA shall follow the general principles defined in ISO 14040/44 and the scope defined in this methodology (sections 3 and 4).	1. Life Cycle Assessment report of Biochar/32/ from agricultural waste by Nian'da Biochar Facility in line with • **ISO 14040:2006** (Environmental management — Life cycle assessment — Principles and framework, 2006) • **ISO 14044:2006** (Environmental management — Life cycle assessment — Requirements and guidelines, 2006) • **Puro. Earth biochar methodology version 3** (Puro. Earth, 2022)	The supplier has submitted the LCA report of "Nanjing Nian'da Environmental & Technology Co., LTD's biochar production and use for CORC calculation" developed by Miotech, dated 25/09/2024/32/consisting of input values for emissions at each stage of production and application, the assessment team has cross-verified the input values in the calculation sheet and confirms that the net-negative results are correctly demonstrated. The data entered into the LCA model has been cross-verified with the help of evidence provided by the project developer/33/	Y

	2. LCA calculation sheet	The reporting is in line with standard ISO14040 and the applied methodology/6/ requirements, the same is explicitly mentioned under section 1 of the report. thus, the requirement is met.	
1.1.4. In the biochar production process, the use of fossil fuels (coal, oil, natural gas) for ignition, pre-heating, or heating of the pyrolysis reactor is permitted. However, the co-firing of fossil fuels and biomass in the same reaction chamber is not permitted, as fossil carbon may be mixed with the biochar product. The greenhouse gas emissions associated with use of these fuels must be included in the LCA (i.e. supply of fuel, combustion of fuel, fugitive emissions), as for any other energy and material input used during the production process	1. No cofiring is observed in the retorts at the plant site during the site visit and fuel use records/33,48/ 2. The syngas is redirected back into the kiln for combustion-no exhaust from chimney as confirmed through Environmental and Social safeguard evidences/19/ 3. The LCA calculation sheet accounts for the Flue gas emission figures/39/. 4. CH4 emissions amount in kg/ton of biochar/39/	The gasifier produces flue gas which is used for self-sustaining heating process. This is confirmed from the flue gas test report developed by Jiangsu Best Testing Technology Co., Ltd, dated 15/12/2024/19/ Also, during the on-site audit, cofiring of fossil fuel and biomass is not observed./42/ No additional inputs were observed either during document review or on-site audit. The greenhouse gas emissions associated with the fuels are accounted in the LCA sheet./39/ Thus, the requirement is met.	Y
1.1.5. In the biochar production process,	1. The syngas is redirected back into	The retort is designed to redirect the syngas for	Y

the pyrolysis gases must be combusted or recovered through an engineered process that either negates or makes negligible any methane emissions to the atmosphere. Bio-oil and pyrolysis gases can be stored for later use as renewable energy or materials.	the kiln for combustion-no exhaust from chimney is observed during the physical inspection of the operational kilns. 2. Flue gas emission report dated 15/12/2024 by Jiangsu Best Testing Technology Co. Ltd./19/	combustion thereby preventing the syngas from escaping into the atmosphere. The methods to ensure complete combustion of pyrolysis gas and oil has been documented in Puro Earth biochar production equipment questionnaire/21/ and verified during on-site audit. Therefore, the requirement is met.	
1.1.6. The biochar produced must have a molar H/C_{org} ratio lower than 0.7. The $HC_{org}/$ ratio is an indicator of the degree of carbonization and therefore of the biochar stability. Values exceeding 0.7 are an indication of non-pyrolytic chars or pyrolysis deficiencies	Biochar Analysis report from NOA Testing & Inspection Technology Ltd. dated 29/09/2024/38/ confirms that the molar Hydrogen-to-Organic carbon ratio is 0.35 for the analysed sample.	The molar H/C_{org} ratio was lower than 0.7, therefore the biochar produced is considered of suitable quality as per the qualitative analysis report curated by NOA Testing & Inspection Technology Ltd. certified by China National Accreditation Committee for Conformity Assessment/38/, thus the requirement is met.	Y
1.1.7. The biochar produced must meet any product quality requirements existing in the jurisdiction where biochar is used and for the specific applications considered. In other	The biochar analysis report NOA Testing & Inspection Technology Ltd. dated 29/09/2024 analytics for PAHs/38/	The report of biochar analysis from third-party, nationally accredited lab confirms the sample meets the WBC criteria thereby the biochar quality is found to meet the requirements.	Y

words, the biochar produced must be legal to use in the manner proposed.			
1.1.8. Measures must be taken to ensure a safe working environment, cleaner production principles (see section 5.3.6), and safe handling and transport of biochar, e.g. to prevent fire, dust and health hazards. Such safety measures include, but are not limited to, providing a Material Safety Data Sheet, post-production quenching and cooling of biochar, and appropriate flue gas treatment systems	1. Construction Project Environmental Impact Report dated April 2023 by Ministry of Ecology and Environment of the People's Republic of China/17/ 2. Onsite observations/42/	The Construction Project Environmental Impact Report prepared by the Ministry of Ecology and Environment of the People's Republic of China dated April 2023/17/ declares that the Nian'da Biochar project complies with national and local industrial policies, with a reasonable site selection, and has little impact on the environment. The environmental protection measures taken can effectively control pollutant emissions and ensure environmental safety. The project also involves safety risk identification and prevention measures to ensure timely response in emergency situations. Thus, condition is met.	Y

Section 1.2 Requirements for the production facility audit			
	Verification Method	Verification remarks	Requirement met?

1.2.1 The Production Facility Auditor checks the Production Facility against the Requirements for activities to be eligible under the general rules of Puro Standard and the specific requirement in this methodology (section 1.1.), and the Proofs and evidence needed from the CO_2 Removal Supplier (section 5).	The assessment team conducted and On-site Production Facility Audit.	The assessment team found the production facility to be in line with the Puro Standard General Rules version 4.0/1/, Additionality Assessment Requirements version 2.0/3/, Stakeholder Engagement Requirements version 1.1/4/ and Puro biochar methodology/6/ requirements as discussed in section 2 of this report.	Y
1.2.2. The CO_2 Removal Supplier shall be able to demonstrate Environmental and Social Safeguards and that the Production Facility activities do no significant harm to the surrounding natural environment or local communities	1. Environmental Impact Evaluation report/17/ 2. Nian'da Environmental Impact Assessment 3. Stakeholder/17/ Engagement Report 4. Environmental and Social Safeguard questionnaire /18/	The documents submitted by the supplier demonstrate that the production facility follows the local environmental and social regulations, the stakeholder engagement was conducted along with the EIA report prepared by the Ministry of Ecology and Environment of the People's Republic of China, dated April 2023/17/ The VVB also interviewed the farmers of the adjacent agricultural land and a professor of Nanjing Forestry University who confirmed how locals were consulted before the production facility was established in their locality and their queries were	Y

		resolved by the project supplier in a satisfactory manner/42/ The project developer has also provided the registration for stationary pollution sources of the facility dated 08/10/2024 to 07/10/2029, flue gas test report by Jiangsu Best Testing Technology Co., Ltd, dated, 15/12/2024, Project Record Certification by Nanjing Qixia District Administrative Examination and Approval Bureau, dated 29/04/2022/19/No negative impact was observed by the locals due to the establishment of the biochar production facility. The CO_2 removal supplier has provided the Biochar Material Safety datasheet, providing an assessment of the identification of hazards at the facility and mitigation measures such as firefighting measures, handling and storage conditions, emergency treatment of leakages and first aid. The CO_2 removal supplier has also provided the Job Safety Operating Procedures document specifying operating	

		procedures and emergency accident operation plans. The plans were reviewed and discussed during the on-site audit. Moreover, interviews with the personnel at the biochar facility were conducted to confirm the same. Photographs and attendance record for health and safety training provided to the biochar facility workers has been provided.	
1.2.3 The CO_2 Removal Supplier shall be able to demonstrate additionality, meaning that the project must convincingly demonstrate that the CO_2 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, CO_2	1. Simple cost analysis-confidentiality sheet.xlsx 2. Additionality_Nian'da Biochar Facility.pdf – Puro Earth Baseline and Additionality Assessment Questionnaire	The CO_2 removal supplier has demonstrated additionality through simple cost analysis as the project activity does not make any revenue from distribution of biochar. The project also does not receive any public subsidies as confirmed from interview with the owner of the Nian'da biochar facility, Mr. Shenn Tao. This is in compliance with the Puro Additionality Assessment Requirements/3/ for demonstrating simple cost analysis.. The CO_2 removal supplier has appropriately filled in the Baseline and Additionality Assessment Questionnaire/13/,	Y

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.		disclosing the cost structure of the capital and operational expenditure, providing all evidence documentation of the rotary charring furnace and processing contract, plant and building costs, construction, processing and installation costs, factory paving costs, beam construction costs, factory fence installation costs, electricity invoices, LPG invoices and labour cost reports/14/ The identified alternate scenario is the continuation of the current practice of crushing the straw and returning it back to the filed. Since there is no revenue from the sale of biochar to the project developer, the project activity seeks carbon finance. The assessment team confirms that simple cost analysis is the appropriate method to demonstrate additionality since the project does not have any other source of income besides carbon finance as documented in the simple cost analysis spreadsheet/12/	

1.2.4. The Production Facility Auditor checks that the Production Facility is capable of metering and quantifying the biochar output in a reliable manner, for the Quantification of CO_2 Removal (section 4). This check also prepares the CO_2 Removal Supplier for producing the periodic Output Report -The quantity of the biochar produced and sold is quantified and documented in a reliable manner (sections 4.2., 5.3., 5.4 and 5.5.) -Relevant meters are in place and they are calibrated -The emissions from cultivation, harvest and transportation of the biomass are estimated and calculated in a reliable manner (section 4.3.) -The material and energy use of the Production Facility can be quantified and the emissions from the process calculated	1. Biochar production records (08/08/2023 to 31/05/2024)/30/ 2. Records of biochar end-use/23/ 3. Statement of End Use- Biochar/24/ 4. Fuel slips/33/ 5. Weight slips/34/ 6. Equipment list and Calibration/29/ requirements 7. CORC report summary v4.0/40/ 8. LCA report and assessment sheet./32/ 9. Mass and energy balance of production process sheet/22/	The Nian'da Biochar production facility has been operational since August 2023 and the log for biomass consumed, and biochar produced has been shared with the assessment team. The production of first biochar batch started on 08/08/2023 as evident from the weigh slips of biomass consumed in the facility. The audit report for the first facility audit therefore accepts the same as the production date. The output has been quantified based on the amount of biochar applied to the agricultural fields during the removal period and accounted in the inventory spreadsheets, which is cross-checked from the manually recorded weigh slips of the exiting vehicle. Section 4.3: The emissions from cultivation, harvest and transportation of the biomass: no activities are reported as the sourced biomass is an agricultural residue collected from the local farmers. The transportation to the facility site emissions have been	Y

(section 4.4.) - The emissions from biochar post-processing, transportation, and use are estimated and calculated in a reliable manner (section 4.5.) -The auditor goes through the Quantification of CO_2 Removal requirements with the CO_2 Removal Supplier, so that the Supplier is able to calculate the CO_2 Removal independently in its Output Report.		duly accounted as demonstrated in the LCA report. Section 4.4 & 4.5: The mass and energy balance of production process assessment sheet has been provided by the supplier, the input values are found traceable and cross-checked through production logs, moisture meter records, diesel consumption records etc. maintained onsite and shared to assessment team.	
1.2.5. Collection of standing data of the Production Facility. The Production Facility Auditor collects and checks the standing data of the Production Facility and the CO_2 Removal Supplier.	- Business License of Nanjing Nian'da Environmental - Biochar Production/10/ and application logs - Construction Project Environmental Impact Report dated April 2023 by Ministry of Ecology and Environment of the People's Republic of China/17/	The verified quantity of biochar produced is 229.36 tonne for the current monitoring period from 08/08/2023 to 31/05/2024. The project supplier has identified the production date for 1st batch as 08/08/2023 and produced a total of 121 batches till 24/05/2024, totalling to 229.36 tonnes of biochar. The biochar production is equivalent to consumption during the removal period as confirmed from the weigh slips records.	Y

		The removal method is verified as the application of biochar as soil additive and the date of first application is verified as the date on which the Production Facility becomes eligible to receive CORCs i.e., 15/11/2023.	

Section 5.2 Biomass Production and supply			
	Verification Method	Verification remarks	Requirement met
5.2.1 Proof of origin and sustainability of the biomass feedstock used must be kept in records, be submitted to Puro, and made available for Output audits. In the case of other non-forest waste biomass: -Raw material needs to be sourced sustainably; however, certificates are not needed, as it is waste material.	- Evidence against Biomass received provided by the Supplier - Dapeng village signed attestation for providing biomass to Nanjing Nian'da Environmental Technology Co., Ltd./36/ - A physical site visit to verify the existence of agricultural waste in the region where the production facility is located/42/	Biomass comprising of agricultural waste such as rape seed straw, wheat straw, corn straw and bean straw is sustainably sourced from local farms under authority of Dapeng Village Committee, Longtan Subdistrict. Qixia District. Since the biomass feedstock is the agricultural waste, no certification was required. It has been confirmed by the assessment team that 30% of the residues are left to the field to avoid decreasing the soil health and crop levels. This is achieved by the measurement setting in the crop harvester, ensuring that not all crops are harvested and a portion remains in the	Y

		field. To safeguard the organic carbon content of agricultural soil and foster sustainable agricultural development, China introduced the **National Agricultural Sustainable Development Plan (2015–2030)** in 2015. This policy mandates the nationwide adoption of straw crushing and its reintegration into farmland as a soil enhancement measure. As a leading agricultural province, **Jiangsu** has been proactive in promoting this practice, striving to maintain a **52% mechanized straw return rate in 2023**. The mechanized process entails finely crushing harvested straw, uniformly dispersing it across the field, and subsequently plowing it to a depth of over **25 cm** using agricultural machinery. Therefore, the condition is met.	
5.2.2 Lifecycle assessment data for the biomass production and supply must be	Verified during the LCA and CORC calculation/39/	The LCA calculation sheet is reviewed, and calculations are demonstrated in a retraceable manner.	Y

provided and documented			

Section 5.3 Biochar Production			
	Verification Method	Verification remarks	Requirement met
Section 5.3.1 The biochar producer must provide data trail and documentation on the amount of biochar produced. This includes: i. Continuous documentation of production for the whole period, taking into account any significant changes or stops in production ii. Data and methodology applied to calculate the dry mass of biochar produced	• Biochar production records/30/ • Equipment list/21/	The assessment team confirms that the biochar production and reporting requirements are met.	Y
Section 5.3.2 The biochar producer must, at a minimum, provide the following data on the amount of biochar produced: i. Continuous load cell measurement of the biochar production for the whole period ii. Water input measurement	• Biochar production records (08/08/2023 to 31/05/2024)/30/ • Biochar applied (end use) and fuel track sheet/34,23/	The biochar production record details have been demonstrated under para 1.2.4 above. The production records have been verified. The input water has been accounted during the environmental impact assessment and as per the EIA report, the domestic sewage of the project is used to make organic fertilizer and	Y

		returned to the fields and is not discharged.	
Section 5.3.3 Life cycle assessment data for the biochar production	LCA sheet/39/	The LCA calculation sheet is reviewed, and calculations are demonstrated in a retraceable manner.	Y
Section 5.3.4 Biochar laboratory analysis - total organic carbon content, total hydrogen content, and calculated H/C_{org} ratio	Biochar Analysis report from NOA Testing & Inspection Technology Ltd. dated 29/09/202438/	The biochar produced meets the WBC criteria	Y
Section 5.3.5 Analysis for presence of PAHs and heavy metal content	Biochar Analysis report from NOA Testing & Inspection Technology Ltd. dated 29/092024/38/	The biochar produced meets the WBC criteria	Y
Section 5.3.6 The CO2 Removal Supplier must have a protocol in place to ensure both representative sampling (i.e. biochar sent for analysis is representative of the batch produced) and appropriate testing frequency (i.e. biochar is sent for analysis as often as needed to reflect variability and seasonality in biomass feedstock and production conditions) of the biochar produced	Protocol for Biochar Sampling at Nian'da Biochar Facility	The sampling procedure for the production facility includes: **Sampling:** Conducting a random sampling of 1 litre every 24 hours, stored for a month of production to monitor consistency and quality. **Frequency**: A representative sample from different batches with no significant changes in raw materials is collected for testing once a year. However, significant changes in raw material composition must be recorded and	Y

		corresponding samples to be tested regularly.	
Section 5.3.7 The CO2 Removal Supplier must comply with local environmental regulations, with respect to emissions of pollutants to air, water, and soil.	- Construction Project Environmental Impact Report dated April 2023 by Ministry of Ecology and Environment of the People's Republic of China/17/	The project is in compliance with the local environmental regulations as demonstrated in the Environmental Impact Report dated April 2023 by Ministry of Ecology and Environment of the People's Republic of China	Y

Section 5.4 Biochar Use			
	Verification Method	Verification remarks	Requirement met
5.4.1. Life cycle assessment data for the biochar use must be provided and documented.	LCA report summary - LCA report of Nanjing Nian'da Environmental & Technology Co., LTD's biochar production and use for CORC calculation – Prepared by MioTech, dated 25/09/2024	The Life cycle assessment data for the biochar use has been provided and documented.	Y
5.4.2. Proof that the end-use of the product does not cause CO_2 to return to the atmosphere (it is not used as fuel or reductant) must be kept in records, be submitted to Puro, and made available for Output audits. The proof can be an offtake agreement,	-Soil application photographs and videos/43/ - Records of biochar end use from 15/11/2023 to 31/05/2024/23/	Para 1.1.1 of the applied methodology requires that the Biochar must be used in applications that preserve its carbon storage property (e.g. greenhouse substrates, surface water barrier, animal feed additive, wastewater treatment, insulation material,	Y

documentation of the sale or shipment of the product, indicating the intended use of the product		landfill/mine absorber, soil additive). The project activity uses biochar as the soil additive as verified from the soil application pictures. The biochar application is executed at nearby farm leased to Nian'da facility by Dapeng Village Shareholding Economic Cooperative (Longtan Street, Qixia District, Nanjing). During the current removal period the records of biochar end-use has been submitted by the project supplier	
5.4.3. Justification on the soil temperature selected for the calculation of the biochar carbon sequestration	1. Geocoordinates of the biochar application site (Lat: 32.20939, Long: 119.1627) 2. SBI01_Annual_Mean _Temperature_5_15cm.tif	The soil temperature is confirmed from independent research through sources such as Nanjing.Government data and research papers. data is recorded to calculate the biochar permeance calculation. Based on the result of these calculation, the biochar application sites are selected.	Y

	Section 5.5 No double counting		
	Verification Method	Verification Remarks	Requirement met
5.5.1. Double counting is avoided by the use of the Puro Registry, with a system of unique identification of each CORC that guarantees it is only used once. Each CORC in the registry contains information on Production Facility registration and crediting period dates, verification, issuance and cancellation transactions as well as the title and ownership over time.	Facility statement provided by the Puro as a part of Facility Audit Package. Facility ID issued by Puro is 577494	This has been Verified through the facility registration details provided by Puro.	Y
5.5.2 A statement is needed from the CO_2 Removal Supplier that the underlying physical product (biochar) in which the CO_2 is stored will not be sold or marketed as "climate positive" if the CO_2 removal certificate associated with the underlying physical product (biochar) is removed from the underlying product and sold to another	Statement of understanding of physical product decoupling Dated: 23/09/2024/25/	The biochar produced is transported to the application site from the production facility and no commercial packaging is done, the product is provided to the interested parties free of cost and does not incorporate any marketing	Y

stakeholder not associated with the underlying physical product.		elements. Furthermore, the direct application to the site by the removal supplier with bilateral agreements in place with the end-user thus eliminating chances of re-associated with the underlying physical product. Thus, the requirements are met.	
5.5.3. Check of the packaging of the product (how the product is branded) is needed, if CO_2 removal certificate associated with the underlying physical product (biochar) is removed from the underlying product			
5.5.4. No marketing and branding claims can be made by the end-user (user of biochar) that the underlying physical product (biochar) is a carbon sink, when the decoupled CO_2 removal certificate has been sold to and accounted by another stakeholder not re-associated with the underlying physical product. The proof can be an offtake agreement, documentation of the sale or shipment of the product, indicating the procedures for claiming the CO_2 removal certificate			

APPENDIX 2: AUDIT FINDINGS

CL from this verification

CL ID	01	Section no.	4.3	Date : 20/02/2025

Description of CL

Facility Audit

In reference to section 4.3 of the PDD and file "Additionality_Nian'da Biochar Facility.pdf", following observations have been identified:

1. Section A.5 of the "Baseline and Additionality Questionnaire, Version 19", states that "the biomass carbonization furnace equipment processing contract was signed on January 22, 2024" which is the commitment date of the facility. However, the monitoring period has been defined from **08/08/2023 to 31/05/2024.** Clarification is required on how the monitoring period and crediting period (*The first date of the first Monitoring Period marks the beginning of a Crediting Period in line with Puro Standard General Rules version 4.0*) can commence prior to the date of the commitment period and start of operation of the facility.
2. The year pertaining to installation and operations of Biofurnace is not defined in the "Baseline and Additionality Questionnaire version 1.9" in section A.5 and thus it is unclear to deduce the exact start date of operations. Please provide clarification on the exact date of the biofurnace installation and commencement of operations.
3. The excel sheet "Simple cost analysis confidential" has energy cost value of 63,931 CNY (cell D7 of Sheet 1). However, this value is inconsistent with the sum of the energy cost calculated by adding the costs mentioned in the electricity invoices and LPG invoices provided. Moreover, the value is a punched in value with no traceable links. Please provide the calculations based on electricity consumption applicable to the project activity region and reflect the same in the excel sheet.
4. The costs pertaining to electricity and LPG consumption are accounted for a period of 10 months, - August 2023 – May 2024 while labour costs, leased farmland cost are accounted on annual basis. Please provide clarification on the same.

Project participant response | **Date :** 24/02/2025

Answer 1: Sorry, this is a clerical error. The right time is January 22, **2023**, which can be confirmed by the contract file "1. Rotary charring furnace" (located in the Facility Audit>0.2 Additionality>evidence piece-confidentiality). And the "Baseline and Additionality Questionnaire, Version 19" has been revised.

Answer 2: The Biofurnace was completed at the end of April 2023, followed by installation and commissioning from May 2023. Until August 8, 2023, the Biofurnace began to officially operate.

Answer 3: The excel sheet "Simple cost analysis confidential" has been revised, so you can check the value with traceable links.

Answer 4: Thanks for the correction. In June and July 2024, some of the remaining LPG was consumed, so the electricity invoice for June and July 2024 have been added. At the same time, the first carbon credit period of the project is adjusted from August 8th, 2023 to July 31th, 2024, and the use time of equipment and ton-bags in LCA is also adjusted from 10 months to 12 months. Also, data on CO_2 emissions from electricity in LCA have been updated. Please check them.

Documentation provided by project participant

Revised "Additionality_Nian'da Biochar Facility.pdf"
Revised "Simple cost analysis-confidentiality.xlsx"
Revised "10.Electricity invoice.pdf" & "10.Electricity invoice_EN.pdf"
Revised "Summary of disel, LPG, and electricity record.pdf"
Revised "LCA Report_Nian'da Biochar Facility.docx"
Revised "LCA Result_Nian'da Biochar Facility.xlsx"

VVB assessment	Date: DD/MM/YYYY
1: The date has been verified as 02/01/2023 from the contract file “Rotary charring furnace”. The clerical error has been updated. **CLOSED**. 2: The chronology of equipment installation and commissioning has been clarified. **CLOSED.** 3: The energy cost calculation has been accurately and traceably demonstrated in the “Simple cost analysis” sheet. **CLOSED.** 4: The LCA calculation has been updated and the invoices of electricity for the month of June nd July 2024 have been added. **CLOSED** **CL 01 is closed.**	

CL ID	02	Section no.	4.3	Date : 23/03/2025
Description of CL				
Para 3.3.2 of Puro Additionality Assessment Requirements Version 2.0 states that: “The CO2 Removal Supplier shall document the costs and revenues associated with the carbon removal project activity and the alternatives identified and demonstrate that there is at least one alternative which is more profitable than the project activity without carbon finance.” In the “Simple Cost Analysis” spreadsheet, only the costs pertaining to the project activity have been demonstrated. The Project developer is requested to provide clarification on if there are the credible alternative(s) available to the project activity that provide comparable outputs or services.				
Project participant response				**Date :** 24/03/2025
Answer: Alternative: if there are no project activity, the current situation, that is, straw crushing and returning to the field will continue, and no carbon sequestration will occur. As the biochar is not sold, and there is no income generated, so the project activity is cost more than the alternative scenario. In other words, alternative is more profitable than project activity.				
Documentation provided by project participant				
Revised “Additionality_Nian’da Biochar Facility.pdf”				
DOE assessment				**Date:** 24/03/2025
The alternative option to the project activity has been identified as the continuation of the current practice of returning the biomass to the field, yielding GHG emission. The biochar facility earns no revenue from the sale of biochar and the operating costs have been defined in the simple cost analysis sheet proving that this is a loss making and hence financially additional project when compared to the alternative. **CL 02 is closed.**				

Table 2.CAR from this verification

CAR ID	01	Section no.	4.4	Date : 20/02/2025
Description of CAR				

Output Audit: In reference to excel sheet "CORC Report Summary_Nian'da biochar facility>Biochar Batch Records>Columns W,X,Y: The above-mentioned columns (W/X/Y) calculate Life cycle emissions associated with production and use of the respective biochar batch. However, the input values are punched in values in the excel sheet with no traceable data. Thus, it is unclear to deduce which factors and figures from LCA sheet are being considered for emission calculations. Please include formulae led figures derived from LCA results.
Project participant response **Date :** 24/02/2025
Answer: The columns W,X,Y result from the product of column H of same excel sheet and column N of the excel sheet "LCA Result_Nian'da Biochar Facility>LCIA". The calculation has been revised, so that the result is now traceable, please check it.
Documentation provided by project participant
Revised "CORC Report Summary_Nian'da Biochar Facility.xlsx"
VVB assessment **Date:** 15/03/2025
The values are now demonstrated in a traceable manner in the Corc Report Summary Nian'da biochar spreadsheet. Therefore, the finding is closed. **CAR 01 is closed.**

CAR ID	02	**Section no.**	5.1	**Date :** 20/02/2025
Description of CAR				
Facility Audit In reference to Section 1.6 of Stakeholder Engagement Requirements v.1.1 and section 3 of Puro Stakeholder Engagement Report template v.2.0, Section 3 "Plans for continued consultation during the crediting period" of the Stakeholder Engagement Report" does not include relevant information about the description of planning for continued consultation during the crediting period. Please fill in the section as per the template guidance and include the process of continued stakeholder consultation.				
Project participant response				**Date :** 24/02/2025
It has been added, please check it.				
Documentation provided by project participant				
Revised "Stakeholder Engagement Report.pdf"				
DOE assessment				**Date:** 15/03/2025
The stakeholder engagement report has been updated to include plans for continued consultation. Therefore, the finding is closed. **CAR 02 is closed.**				

CAR ID	03	**Section no.**	LCA	**Date :** 20/02/2025
Description of CAR				
Output Audit/LCA Report/LCA Sheet- LCA Result_Nian'da Biochar Facility 1. In reference to **Table 2 under "LCA report_Nian'da Biochar Facility.docx",** the quantity of raw material supply i.e. biomass supplied to facility does not sum up to 734.1 tonnes as indicated in the LCA sheet titled "LCA Result_Nian'da Biochar Facility". Please clarify the inconsistency observed. Clarification is also needed on the how the input biomass is being quantified into four different categories and provide the receipts defining the quantity received with respect to the biomass type. 2. The segregation of steel used for equipment production with respect to chromium steel and low-alloyed steel is not disclosed under the evidence shared "Calculation of raw materials for carbonizing furnace.pdf". Please segregate and define the part where respective type of steel is being used to substantiate the quantity of different steels used.				

3. **In folder: Output Audit>04. Revised LCA calculations & supporting data>evidence piece- file name -Electricity invoice_EN:**
   The electricity invoice No. 18831758 is marked for the month of February and March and same is being accounted in the LCA calculations. However, the receipt defines the billing cycle from 01/03/2024 to 31/03/2024. Kindly provide clarification on the inconsistency and provide the supportive against electricity consumption for the month of February 2024.
4. **The LCA Sheet titled: LCA Result_Nian'da Biochar Facility>LCI Worksheet>Cell E75** defines the average flue gas emission from pyrolysis which is for instance 44000 Nm3. However, the source of input data is not mentioned under the column for data source. The same has been observed for N_2O and CH_4 emissions. Clarification is needed on the source of the input data and inclusion of the same in the LCA sheet.
5. In reference to **LCA Result_Nian'da Biochar Facility>visualization worksheet and Figure 3 of LCA report,** the value for E_{stored} is calculated as -390290/dry weight of biochar (LCIA!O11). The figure -390290 is a punched in value which could not be traced back to the LCA sheet. Clarification is needed on the source of this figure and its significance in estimating the E_{stored} value.

6. IN reference to **section 5 of "LCA report_Nian'da Biochar Facility.docx**", the following inconsistencies have been observed:
   a. The amount of CO_2 removed per tonne of dry weight biochar is mentioned to be 1469.99 kgCO2eq in section 4.3.1 "Identification of significant issues". However, section 5 "Discussion, conclusions, and recommendations" mentions that "based on the LCA, 1472.94 kgCO2eq is removed per tonne of dry weight of biochar" Please provide clarification on the inconsistency between the values across the mentioned sections.
   b. Section 4.3.1 mentions that "The biggest emitter during the life cycle is the production process (222.57 kgCO2eq)." However, section 5 mentions that "The biggest emitter during the life cycle is the production process (219.62 kgCO2eq)" Please provide clarification on the observed inconsistency between the values.
   c. The amount of CO_2 emitted under residual emissions is inconsistent between section 4.3.1 and section 5 as the report as under section 4.3.1 it is mentioned as 16.88 $kgCO_2eq$ and mentioned as 13.93 $kgCO_2eq$ in section 5. Please provide clarification and rectify the observed inconsistency.
   d. The total emissions value is inconsistent between sections 4.3.1 and section 5 of the report as under section 4.3.1 it is mentioned as 231.67 $kgCO_2eq$ and section 5 mentions it to be 228.72 $kgCO_2eq$ Please provide clarification on the observed inconsistency.

Project participant response	**Date :** 24/02/2025

Answer 1: The raw material data in Table 2 of the LCA report came from the straw collection and storage data provided by the project owner at the beginning. Later, we found that the data recorded in the production log should be used instead of this one, so we updated it in the LCA model, but forgot to change the data in Table 2 of the LCA report, resulting in data inconsistency. Moreover, in fact, all the straw materials were stacked together, so we only recorded the total amount of biomass used 734.1 tons (this data can be confirmed by "Records of biomass and biochar.xlsx" & "Records of biomass and biochar_Summary_EN.pdf"), and didn't distinguish the types of materials. Now this part of the content has been revised. Please check it.

Answer 2: The raw materials of the production equipment have been differentiated, and the equipment uses a total of 18.51 tons of low carbon steel and 2.58 tons of SUS 304. Please check the file "Calculation of raw materials for carbonizing furnace.pdf", which located in "Output Audit>04.Revised LCA calculation & supporting data>evidence piece".

Answer 3: The electricity invoice of February has been found and submitted, and the LCA files (excel & word) have been revised at the same time. Please check them.

Answer 4: Data sources have been added. E75 is from the "Environmental impact assessment_Nian'da Biochar Facility.pdf", and E76 & E77 are from the "Flue gas test report of Nian'da facility.pdf", please check them. Answer 5: The data "-390290 (kg)" is actually the carbon storage of 229.4 tons of biochar in the accounting period after 100 years, which is from "CORC Report Summary_Nian'da Biochar Facility.xlsx>CORC Monthly summary Worksheet>Cell J53". The data source has been added to Cell C5 of the "LCA Result_Nian'da Biochar Facility.xlsx", and the units & +/- symbols have been converted. And this data is used to calculate the carbon storage per ton of dry biochar after 100 years. Answer 6: As for the result of LCA, we modified and improved it under the advice of Puro's internal experts. However, when the LCA report was updated at last, the contents of section 4.3.1 were ignored, which resulted in inconsistent data. And now, the LCA report has been revised, please check it.
Documentation provided by project participant
Revised "LCA Report_Nian'da Biochar Facility.docx" *Revised "LCA Result_Nian'da Biochar Facility.xlsx"* *Revised "CORC Report Summary_Nian'da Biochar Facility.xlsx"* *Revised "Calculation of raw materials for carbonizing furnace.pdf"*
VVB assessment — **Date:** 15/03/2025
1. The inconsistency in the quantity of raw material has been addressed. **CLOSED.** 2. The raw materials pertaining to the production equipment has now been segregated. **CLOSED.** 3. The electricity invoice for the month of February has been provided. **CLOSED.** 4. The sources of input data are now added in the LCA result spreadsheet. **CLOSED.** 5. Traceable calculation of carbon storage emission has now been provided. **CLOSED.** 6. The LCA report has been revised, and all inconsistencies have been addressed. **CLOSED.** **CAR 03 is closed.**

APPENDIX 3: AUDIT TEAM EXPERIENCE

Competence Statement	
Name	Mehr Munjal
Education	B.Sc. (Hons) – Bio-chemistry M.Sc. – Biotechnology
Experience	2 + Years
Field	Biochemistry
Approved Roles	
Team Leader	YES
Validator	YES
Verifier	YES
Local expert	YES
Financial Expert	NO

Technical Reviewer	NO		
TA Expert (X.X)	YES (TA 1.1, 1.2, 13.1)		
Reviewed by	Shifali Guleria (Quality Manager)	Date	06/01/2025
Approved by	Deepika Mahala (Technical Manager)	Date	06/01/2025

Competence Statement			
Name	Anjali Chaudhary		
Education	Bachelor of technology in Civil Engineering		
Experience	2+ Years		
Field	Civil Engineering		
Approved Roles			
Team Leader	YES (VM only)		
Validator	YES (VM only)		
Verifier	YES (VM only)		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	Yes		
TA Expert (X.X)	YES (TA 1.1, 1.2, 3.1, 13.1 & 13.2)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	11/09/2024
Approved by	Deepika Mahala (Technical Manager)	**Date**	11/09/2024

Competence Statement	
Name	Mohd Aamir Khan
Education	Ph. D. (Environmental Microbiology) M.Sc. (Biotechnology) B.Sc. (Life Sciences)
Experience	5+ Years
Field	Wastewater treatment and Waterbodies management
Approved Roles	
Team Leader	NO
Validator	YES
Verifier	YES
Local expert	YES(India)
Financial Expert	NO

Technical Reviewer	NO		
TA Expert (13.1)	YES		
add rows, if necessary			
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	03/01/2025
Approved by	Deepika Mahala (Technical Manager)	**Date**	03/01/2025

APPENDIX 4: REFERENCE DOCUMENTATION

S.no	Title	Version
1.	Puro Standard General Rules	Version 4.0
2.	Validation and Verification Requirements	Version 1.1
3.	Additionality Assessment Requirements	Version 2.0
4.	Stakeholder Engagement Requirements	Version 1.1
5.	Biomass Sourcing Criteria	Version 1.0
6.	Puro Biochar methodology	Edition 2022
7.	Project Description Document	1.0
8.	Facility details from Puro Registry	-
9.	Introduction of Nian'da Biochar Facility Project Report	-
10.	Business license of Nanjing Nian'da Environmental Technology Co., LTD	Established, 09/12/2019
11.	Business license of Miao Ying Ling Tan Information & Technology (Beijing) CO., Ltd. (Miotech)	Established, 02/03/2021
12.	Simple cost analysis spreadsheet	
13.	Puro Earth Baseline and Additionality Questionnaire	Version 1.9

14.	Simple cost analysis evidence: 1. Rotary charring furnace processing contract 2. Nian'da voucher 1 & 2 3. Nian'da accounting voucher – Building costs, plant costs 4. Nian'da accounting voucher – Leased farmland 5. Construction Agreement 6. Processing, installation and construction contract 7. Nian'da accounting voucher (factory paving) 8. Nian'da accounting voucher (beam construction) 9. Nian'da accounting voucher (factory fence installation) 10. Electricity invoices 11. LPG invoices 12. Labor cost report 13. Project expenditure summary report	1. Dated, 02/01/2023 2. Dated, 01/2023 3. 31/01/2023 4. 31/01/2023 5. 17/04/2023 6. Dated, 16/05/2023 7. Dated, 30/04/2023 8. Dated, 31/07/2023 9. Dated, 31/08/2023 10. For entire reporting period. 11. For entire reporting period 12. Dated, 10/12/2024
15.	Puro Earth Environmental and social safeguards questionnaire	Dated, 23/09/2024
16.	Puro Earth Environmental evaluation report	-
17.	Construction Project Environmental Impact Report (Pollution Impact Category) – prepared by the Ministry of Ecology and Environment of the People's Republic of China	Dated, April 2023
18.	Puro Earth Stakeholder Engagement Report	Dated, 23/09/2024
19.	Environmental and Social Safeguards evidences" i. Registration for stationary pollution sources ii. Flue gas test report – Jiangsu Best Testing Technology Co., Ltd. iii. Project record certification – Nanjing Qixia District Administrative Examination and Approval Bureau iv. Project record registration summary v. Nanjing Nian'da Environmental Technology Co. Ltd Biochar Project Questionnaire summary vi. Stakeholder survey invitation vii. Stakeholder questionnaire combined result	i. 08/10/2024 – 07/10/2029 ii. Dated, 15/12/2024 iii. 29/04/2022 iv. 2022 v. – vi. 22/07/2024 vii. -
20.	Biomass types and origin report	-
21.	Puro Earth biochar product equipment questionnaire	-
22.	Mass and energy balance of production process	-

23.	Biochar end-use records	15/11/2023 16/11/2023 17/11/2023 18/11/2023 15/03/2024 16/03/2024 17/03/2024
24.	No Biochar sales – statement	-
25.	Puro Earth – Statement of understanding of physical product decoupling	Dated, 23/09/2024
26.	Records of biomass and biochar – biomass and biochar quantity, moisture percentage of biochar, dry weight of biochar.	-
27.	Production staff management rules and regulations	-
28.	Soil temperature result	-
29.	Metering equipment technical details and calibration evidence – i. Electricity meter ii. Electronic weigh scale iii. Moisture meter	i. No calibration required. Calibration is valid for upto 8-10 years after installation. ii. Factory calibrated, no calibration required iii. Factory calibrated, no calibration required
30	Biochar production manual logs 2023-2024	-
31	LCA model for Nian'da biochar facility	-
32	LCA report of Nanjing Nian'da Environmental & Technology Co., LTD's biochar production and use for CORC calculation – Prepared by MioTech	Dated, 25/09/2024
33	LCA Evidence- i. Calculation of raw material for carbonizing furnace ii. Diesel record iii. Electricity invoices iv. Instructions for use of biomass bags v. LPG record vi. Summary of diesel, LPG and electricity consumption	-

34.	Biochar weight manual log Biochar moisture content manual log	For reporting period
35.	Biomass warehouse record	For reporting period
36.	Dapeng village signed attestation for providing biomass to Nanjing Nian'da Environmental Technology Co., Ltd.	-
37.	Sustainability evidence of source biomass	-
38.	Biochar lab test report – prepared by NOA testing & Insepction Technology Ltd.	29/09/2024
39.	LCA Result_Nian'da biochar facility	-
40.	CORC report summary_Nian'da biochar facility	-
41.	Puro Comments on LCA calculation	-
42.	On-site assessment records	12/03/2025
43.	Time stamped and geotagged soil application photographs	-