



# COMBINED PRODUCTION FACILITY & OUTPUT AUDIT REPORT


KEY PROJECT INFORMATION	
REPORT ID	PE.JVV.25.012(6)
REPORT TITLE	“SEEK Biochar in Shanghai” combined facility and Output Audit Report
REPORT DATE	09/03/2026
VERSION NO	1.0
CO <sub>2</sub> REMOVAL SUPPLIER	Climate Bridge (Shanghai) Ltd.
PRODUCTION FACILITY NAME	SEEK Biochar in Shanghai
PRODUCTION FACILITY ADDRESSES	No. 2070 Lvxin Road, Lvxiang Town, Jinshan District, Shanghai, China
PRODUCTION FACILITY ID	469599
PRODUCTION FACILITY COORDINATES	Latitude: 30.8533 N Longitude: 121.2025 E
CREDITING PERIOD	18/05/2025 – 17/05/2030
REPROTING PERIOD	18/05/2025 – 31/08/2025
CO <sub>2</sub> SINK SECTOR	Biochar
APPLIED METHODOLOGY	Biochar Methodology Edition 2022, v3.0
PURO.EARTH STANDARD VERSION	Puro Standard General Rules Version 4.2
NET VOLUME OF CO <sub>2</sub> REMOVAL	60.44 CORCs
CLIENT	Puro. Earth
PREPARED BY	Earthood Services Limited
APPROVED BY	 Dr. Kaviraj Singh
WORK CARRIED OUT BY	Team Leader, Methodology Expert      Mohd Aamir Khan & Assessor (TA Expert 13.1)  Technical Reviewer & Methodology Expert      Mehr Munjal

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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 audit for the project facility “SEEK biochar in Shanghai” to verify the CO2 removal claims for the period spanning from 18/05/2025 to 31/08/2025. The purpose of the audit was to check the requirements of a Production facility and Output audit and the eligibility of the activity type as per Puro earth certification process. This report summarizes the findings and conclusions of the production facility and output audit, conducted as a formal part of the Puro.Earth certification process. Earthood affirms that it is an impartial auditor, free from any conflicts of interest, capable and qualified to complete this audit in accordance with the Puro Standard and the associated Validation and Verification Body Requirements.

SEEK Biochar Facility in Shanghai is operated by SEEK Bio-Technology (Shanghai) Co. Ltd. as per the Business License/09/. The Biochar facility utilizes rice husk as In-field agricultural waste and urban green cuttings comprising of tree branches and wood as the green waste feedstock to produce biochar. As per Puro.Earth biomass sourcing criteria, the rice husk is categorized under category K “In-field agricultural residues” and urban green cuttings under category D “Green waste/05/. The rice straw biomass feedstock is sourced from nearby villages through cooperative societies operational in the region as confirmed through straw harvest and collection service contract/15/, while the urban green cuttings are sourced from different entities involved in the collection of landscaping waste as confirmed through Landscaping branch purchase contract/15/. The collection of biomass feedstock from the source to the Biochar facility has been verified through the biomass stock in records during the monitoring period 18<sup>th</sup> May 2025 to 31<sup>st</sup> August 2025/57/.

Rice husk with origin from agricultural waste is categorized as harvest residues by EBC under ID Ag-05/63/ and urban green cuttings are categorized under ID R-01/64/. The waste residues undergo pyrolysis to produce biochar which is sold as a fertilizer blend with compost. SEEK Biochar operates a continuous biomass carbonization system with a biomass processing capacity of 2 dry metric tonnes (MT) per hour as verified through the technical specifications and purchasing contract of the pyrolysis equipment/40/, provided under project feasibility study report by SEEK Biochar/08/40/. The average biochar production capacity is 0.9 – 1.1 tonnes of wet weight biochar per hour with average moisture content of 30%/08/39/. Further, the technical details provided under production equipment questionnaire/50/ and the mass and energy balance of the production process/63/ were validated through technical specifications of the SEEK Biochar’s pyrolysis equipment in the carbonization workshop/40/. The ownership of the CORCs generated through this project is retained by Climate Bridge (Shanghai) Ltd. as confirmed through the contractual agreement of the same with facility owner i.e. SEEK Bio-Technology (Shanghai) Co. Ltd./70/.

## 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 and output generated along with the CORCs produced during the monitoring period from 18<sup>th</sup> May 2025 to 31<sup>st</sup> August 2025. The assessment is a joint validation and verification of SEEK biochar facility and verifies compliance of all project documentation and supporting materials with the rules and requirements of the Puro Standard General Rules Version 4.2. In particular:

- Project conformance to the Puro Standard General Rules v.4.2
- Project conformance to the applied biochar methodology Edition 2022 v3.0.
- Life Cycle Assessment (LCA) Model and Report
- CORC Report Summary
- 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 assessing the controls in place to mitigate these risks. The production facility review involved obtaining sufficient evidence, information, and explanations to provide a reasonable level of assurance. The assessment team reviewed adequate evidence to verify the project implementation, data and parameters and emission removal calculations for this monitoring period. Any discrepancies identified during the production facility review and verification assessment were raised as audit findings and successfully resolved. All audit findings are documented in Appendix 2 of this report.

During the production facility and output audit review, the assessment team conducted an on-site inspection of the project activity, as detailed in Section 2, and observed no substantial changes, thereby meeting the requirements for 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	Mohd Aamir Khan	Y	Y	Y	Y	-
Validator (Assessor)	Mohd Aamir Khan	Y	Y	Y	Y	-
Technical Reviewer & Methodology Expert	Mehr Munjal	-	-	-	-	Y

## 2 AUDIT PROCESS

A structured series of audit activities was executed during the on-site audit to independently validate and verify facility operations, installed equipment and measuring devices, production and output data and CORC claims. From the biomass feedstock entering the facility to different operational steps involved in the conversion of rice straw and urban green cuttings to biochar, environmental and social safeguards, the production records of biochar, by-product waste disposal mechanisms were also verified during the on-site audit. The audit activities were conducted in accordance with the *Puro Standard General Rules (Version 4.2)/01/* and the *Puro Biochar Methodology (Edition 2022, Version 3)/06/*. 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.
  - c. Reviewed the process flow from agricultural waste biomass to end product-biochar.
  - d. Checked the mechanisms in place for waste disposal, syngas treatment & water recycling.
  - e. Examined and the efficacy of Environmental and social safeguards at the facility
- 3. Records Examination:**
- a. Inspected feedstock receipt records, including delivery slips and inventory logs, to verify the accuracy and traceability of input materials
  - b. Reviewed production logs documenting daily pyrolysis operations and production outputs to ensure consistency with reported data
  - c. Assessed equipment utilization and maintenance records to confirm proper operational management and adherence to maintenance schedules.
- 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 implemented at the production facility, including worker safety protocols, spill response plan, waste disposal policy and emergency response procedures.
  - b. Reviewed employee social security arrangements, grievance mechanisms to ensure compliance with applicable local regulations and standards.
  - c. Conducted interview with local stakeholder to verify the stakeholder engagement process and the existence of 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 CO2 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 3.0/06/. 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	Audit Activity
	Last Name	First Name	Affiliation			
1.	Liu	Yanyu	Project Manager, Climate Bridge	04 <sup>th</sup> February 2026	Mohd Aamir Khan	1. Opening meeting: Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit. 2. Project Activity (Technology, Location and Implementation) 3. Applicability of methodology 4. Project boundary and emission sources included in the project boundary. 5. Baseline identification 6. Additionality of the project activity (Baseline
2.	Li	Shuhui	Project Manager, Climate Bridge			
3.	Yi	Liqi	Project Manager, Climate Bridge			
4.	Jiang	Aning	SEEK, Project Manager			
5.	Yang	Fei	SEEK, Project Manager			
6.	Han	Lijun	SEEK, Project Manager			

						<p>alternatives, carbon consideration, Investment analysis)</p> <p>7. Physical inspection of the site including observation of biochar production facility, biomass source site and biochar end use sites.</p>
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S. No.	Stakeholders Interviewee			Date	Team member(s)	Topics Discussed
	Last Name	First Name	Affiliation			
1.	█	█	Local villager, Taiping village	04 <sup>th</sup> February 2026	Mohd Aamir Khan	<p>1. Presence in initial stakeholder consultation</p> <p>2. Mode of invitations, information disbursed and Issues raised during consultation meeting</p> <p>3. Awareness about the grievance redressal procedure</p> <p>4. Issues faced by stakeholders during facility operation cycle</p>
2.	█	█	Local villager, Heping village			
3.	█	█	Local villager, Heping village			
4.	█	█	Local villager, Heping village			
5.	█	█	Biomass Supplier	04 <sup>th</sup> February 2026	Mohd Aamir Khan	5. Quantity and type of biomass supplied

						<p>6. Frequency of biomass supplied</p> <p>7. Compliance with local regulations pertaining to waste collection</p>
6.	████	██████	SEEK, QA/QC Manager	04 <sup>th</sup> February 2026	Mohd Aamir Khan	<p>8. Analytical testing procedures</p> <p>9. Biochar sampling procedures</p> <p>10. QA/QC procedures pertaining to equipment and biochar handling</p>
7.	████	████	Biochar End User	04 <sup>th</sup> February 2026	Mohd Aamir Khan	<p>11. Biochar application procedures</p> <p>12. Usage frequency, dosage and costing</p> <p>13. Trainings pertaining to biochar use</p> <p>14. Procedures to contact SEEK</p>
<p>The information provided by the stakeholders has been found to be consistent with the Puro Stakeholder Engagement Report/12/. The stakeholders, who majorly include local villagers, along with biomass feedstock supplier, and the biochar end-user were interviewed during the on-site visit.</p>						

### 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 Production Facility & Output Audit, a total of 06 CLs and 03 CARs were raised and resolved satisfactorily. The list of CARs/CLs/FARs 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.

<b>4 PRODUCTION STANDING DATA &amp; PROJECT DESCRIPTION</b>
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<b>GENERAL INFORMATION</b>	
Production Facility Name	SEEK Biochar in Shanghai
Facility ID	469599
CO <sub>2</sub> Removal Supplier Name	Climate Bridge (Shanghai) Ltd.
Location	No.2070 Lvxin Road, Lvxiang Town, Jinshan District, Shanghai, China
Crediting Period	18/05/2025 – 17/05/2030
Monitoring Period	18/05/2025 – 31/08/2025
Verified CORC Factor	0.39* CORCs per ton Biochar
Dry mass of Biochar used (for which CORCs are claimed)	154.546 dry metric tonnes

Originally Claimed CORCs for the monitoring period from 18 <sup>th</sup> May 2025 to 31 <sup>th</sup> August 2025	65.23 ton CO <sub>2</sub> eq CORCs
Verified CORCs for the monitoring period from 18 <sup>th</sup> May 2025 to 31 <sup>th</sup> August 2025	60.44 ton CO <sub>2</sub> 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

*\*The calculated value of CORC factor is 0.391051936. The value of CORC factor presented in the table is rounded down to two decimal places (0.39 CORCs per ton biochar). The dry mass of biochar (154.546 dry metric tonnes) on multiplication with CORC factor (0.391051936) equals to 60.4355, which is rounded off to 60.44 CORCs.*

#### **Technical and Non-Technical Description of the Project:**

The biochar production process commences with the preprocessing of rice straw and green urban biomass, including tree branches and waste wood, which are mechanically shredded to achieve a homogeneous particle size and bulk density. This conditioning step is necessary to ensure stable heat transfer and consistent residence time within the pyrolysis system. The processed material is subsequently used as feedstock for the carbonization furnace.

The prepared biomass is conveyed into the carbonization reactor, where it first undergoes preheating to remove moisture without altering its chemical structure. As the temperature increases to approximately 180–300 °C, pyrolysis occurs, decomposing organic components into combustible gases and condensable by-products such as wood tar and wood vinegar, while forming a carbon-rich matrix. The material is then further carbonized at 330–390 °C to enhance carbon content and structural stability, resulting in biochar with high fixed carbon and low volatile matter/40/. During this process, thermal decomposition generates pyrolysis gas (syngas). The syngas is routed through a cyclone dust separator, spray tower, and electrostatic precipitator for treatment, after which it is recirculated to support the ongoing carbonization process/40/. Condensable by-products, including wood vinegar and tar, are periodically extracted, and residual waste streams are managed in accordance with applicable local regulations, as evidenced by the approved Environmental Impact Assessment documentation/11/40/.

Following carbonization, the produced biochar is cooled through a water-based cooling system and discharged at ambient temperature for weighing and sealed packaging. Sampling procedures and determination of dry mass are conducted in accordance with established standard operating procedures/53/, with corresponding guidance provided to suppliers. The final biochar product is

intended for soil application, typically blended with complementary materials for use as a soil amendment or fertilizer.

The equipment inventory and associated technical specifications were validated through review of the relevant technical documentation/08/40/. The process configuration was corroborated using equipment contracts/08/, process flow diagrams/31/, and on-site inspections of the production facility/27/. Internal calibration practices implemented by the project owner were verified through examination of calibration records, certificates, and physical cross-checks during the site visit/27/. The produced biochar undergoes testing for estimation of organic carbon and hydrogen content along with other qualitative analyses.

Sampling of biochar is conducted twice per shift (day and night), with defined collection times to ensure representative sampling over a 24-hour period. Approximately 650 g of biochar is collected from the discharge point using clean, airtight plastic bags while wearing gloves to avoid contamination. The sealed and labelled samples are promptly sent to the laboratory, where four daily samples are processed at a fixed time each day for moisture content determination. In addition, biochar samples are periodically sent to a CMA (China Metrology Accreditation) qualified external laboratory for independent testing of relevant technical, accounting for seasonal variations and fluctuations in feedstock characteristics and operating parameters/53/. The biochar produced by SEEK is not applied to soil as a standalone product but is used as an ingredient to produce biochar based organic fertilizer which is further applied to agricultural soils. The biochar produced fertilizer is tested and found compliant against the industry standard “NY/T 3618-2020: Biochar-based organic fertilizer” confirming the safe use of the product in agricultural applications to soil/34/. Based on on-site observations, review of sampling and batch records, photographic documentation, and discussions with operational personnel, the monitoring and sampling procedures were confirmed to be effectively implemented/27/. Furthermore, the supplier has committed to conducting additional analyses and transparent reporting whenever significant changes occur in feedstock composition or process conditions, such as variations in temperature or residence time.

### **Baseline Scenario and Additionality:**

Based on the review of documented local biomass management practices and discussions with the project proponent and the local stakeholders during onsite audit/27/, the VVB notes that apart from open burning, rice straw and woody residues are conventionally utilized for short-lived applications such as composting, animal feed, or as substrate for edible mushroom cultivation as documented in a World Bank Report on Use of Crop Straw and Bans on Straw Burning/44/, and peer reviewed journal articles for biogenic waste management in China/44/. These practices result in biological degradation or oxidation of the biomass, leading to the release of the contained biogenic carbon back to the atmosphere within a short timeframe. In cases where such residues are not collected or productively used, they are typically left in the fields or disposed of in open areas, where natural decomposition similarly results in the re-emission of carbon through aerobic or anaerobic processes/44/. Therefore,

the VVB concludes that under the baseline scenario, the biomass feedstock does not contribute to durable carbon storage, and the carbon contained therein would be fully returned to the atmosphere as part of the natural biogenic carbon cycle.

The CO<sub>2</sub> removal supplier has demonstrated financial additionality in accordance with the Puro Additionality Assessment Requirements/03/ and CDM Tool 27: Investment Analysis/37/. The step wise demonstration of additionality in line with the Puro Additionality Assessment Requirements/03/ is provided below:

**Step 0: Is common practice analysis needed: Is the methodology TRL 8 or 9**

The Puro Additionality Assessment Requirements, Version 2.0 defines technology readiness level (TRL) of Biochar methodology as 6-7. Since, common practice analysis is required for the technologies with TRL 8 or 9, the demonstration of common practice analysis is not required for current project activity. Therefore, Step 1: Common Practice Analysis is not demonstrated.

**Step 2: Financial analysis options: Does the project have other income besides carbon finance? Or is capex large element in costs?**

The project activity has received one time subsidy from the government initiatives and plans to sell the produced biochar as a fertilizer, blended with compost. Therefore, project activity will have income sources other carbon finance also. Accordingly, the carbon removal supplier has demonstrated the financial additionality through investment analysis/62/.

As the project sells biochar and thereby will generate the income beyond the carbon revenue related income, a simple cost analysis offers a per ton biochar sold comparison but fails to capture the full financial viability of a biochar project. Therefore, a detailed investment analysis is essential for a comprehensive financial assessment.

Internal rate of return (IRR) has been chosen as the financial indicator for the demonstration of financial unviability for project activity. All the input financial parameters considered for investment analysis are provided by the carbon removal supplier with commitment date as 24<sup>th</sup> August 2023, which is construction contract with the contractor/43/. The fair value of the project activity assets at the end of the assessment period are included as a cash inflow in the final year. All project costs have been determined prior to the start date of the project and verified by the assessment team from invoices provided by the carbon removal supplier/62/.

The para 18 under section 6 of CDM Tool 27/37/ states *“In the cases of projects which could be developed by an entity other than the project participant the benchmark should be based on parameters that are standard in the market”*. The SEEK’s financial model has set a project IRR benchmark of 10% as per the standard market range for the construction projects in fertilizer industry as supported by the National Development and Reform Commission (NRDC)/68/. The “Notice on Adjusting the Benchmark Rate of Return for Construction Projects in Certain Industries (NDRC

Investment [2013] No. 586) provides the guidelines for benchmark selection for construction projects. There are no updates to these guidelines on NRDC portal ([https://www.ndrc.gov.cn/xxgk/zcfb/tz/201907/t20190729\\_964563.html](https://www.ndrc.gov.cn/xxgk/zcfb/tz/201907/t20190729_964563.html)), implying that the regulations are still applicable to the financial analysis of construction projects. Chinese regional authorities apply same guidelines by NRDC for selection of benchmark in planning of new construction projects (<https://www.pudong.gov.cn/zwgk/006024008/2024/286/332941.html>). Other case studies referring to NRDC guidelines include IPO/disclosure documents for Chengdu-Pengzhou Highway ([https://static.sse.com.cn/stock/disclosure/announcement/c/202312/001699\\_20231226\\_440V.pdf](https://static.sse.com.cn/stock/disclosure/announcement/c/202312/001699_20231226_440V.pdf)), Yunnan Phosphate Group Co., Ltd. - Asset Evaluation Report ([https://file.finance.sina.com.cn/211.154.219.97%3A9494/MRGG/CNSESH\\_STOCK/2019/2019-7/2019-07-19/5499633.PDF](https://file.finance.sina.com.cn/211.154.219.97%3A9494/MRGG/CNSESH_STOCK/2019/2019-7/2019-07-19/5499633.PDF)).

Therefore, the IRR benchmark selected for demonstration of additionality is appropriately selected in line with the para 18 of CDM Tool 27/37/, which requires a company specific benchmark or benchmark based on parameters that are standard in the market is suitable in the context of underlying project activity. The project activity included production of biochar in a greenfield facility. Further, the intended use of produced biochar is biofertilizer. Therefore, the selected IRR benchmark of 10% refers to the construction projects in broad category of fertilizer industries/68/ and is deemed appropriate by assessment team. The financial model projects a net cash inflow of [REDACTED] with revenues from CORCs and biochar when sold at the price of [REDACTED] and [REDACTED] respectively, with a total of [REDACTED] project returns. However, in absence of revenues from CORCs, but selling biochar at [REDACTED], the total cash inflow of the project reached to [REDACTED], with [REDACTED] project returns. The assessment team cross-verified the input cost parameters included in the financial model against primary supporting documents and relevant invoices to substantiate the project costs and revenues. Based on this review, the team confirms that all input and output costs, along with the associated estimations, have been appropriately incorporated into the financial model/62/.

The project proponent conducted a sensitivity analysis to evaluate the impact of variations in key financial and operational parameters on the project's internal rate of return (IRR) and overall financial viability. The assessment considered changes in static investment costs, annual biochar production (dry basis), operation and maintenance (O&M) costs, and indirect revenue per ton of biochar, with variations ranging from 80% to 120% of the base-case assumptions. The sensitivity analyses results are provided below depicting the resultant IRR obtained with variations ( $\pm 20\%$ ) in major cost parameters:

Range	80%	90%	100%	110%	120%
Static investment	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Annual biochar production (dry basis)	[REDACTED] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

O&M costs	██████	██████	██████	██████	██████████ ██████████
Indirect revenue increase per ton of biochar	██████████ ██████████	██████	██████	██████	██████████

The results indicate that fluctuations in these parameters significantly influence the project’s cash inflows; however, none of the tested scenarios involving changes in static investment resulted in a financially feasible or attractive outcome. Although increases in annual biochar production and associated revenue by 10% and 20% lead to positive cash inflows, the resulting IRR remains below the applicable benchmark. Similarly, a reduction in O&M costs by 10% improves cash flow performance but does not elevate the IRR to a level that meets or exceeds the benchmark threshold.

Based on the review of the sensitivity analysis and supporting financial calculations, the VVB confirms that the project is not financially or economically attractive under baseline conditions and remains unviable without carbon revenue/62/. Consequently, the project activity cannot proceed as the most favourable investment option in the absence of carbon finance. Therefore, the VVB considers the project to be additional in accordance with the Puro Additionality Assessment Requirements (Version 2.0)/03/.

**5 QUANTIFICATION OF CO<sub>2</sub> REMOVAL**

**Quantification of net carbon dioxide removal**

The net carbon dioxide removal is calculated using carbon stored in Biochar, emissions from biomass processing, emissions from biochar production, and emissions from biochar application.

The formula that is used for calculating CORCs is

$$CORCS = E_{stored} - E_{biomass} - E_{Production} - E_{use}$$

The CORCs are calculated for the monitoring period from 18<sup>th</sup> May 2025 to 31<sup>st</sup> August 2025.

INPUT	VERIFIED RATE	UNIT	NOTES (Specifications, source, etc)
Biomass supply inputs (collection, handling, transportation emissions), ( $E_{biomass}$ )	8.09	tonne CO <sub>2</sub> -eq	The emissions from $E_{biomass}$ include emissions from transportation – specifically the transportation from the suppliers to the Biochar facility. The verified average transport distance is within 31 kms, as confirmed from the tree branches stock in records, where distance travelled per trip is accounted/57/. In the current monitoring period, only tree branches generated as waste from urban landscaping works were used as

			<p>biomass feedstock. Therefore, the distance from source and facility is not uniform and varied with each trip. The average distance has been calculated as the ratio of transport (ton km) and net weight delivered to facility. The same has been verified during on site audit/27/. Emission factors were sourced from reputable database: transportation from Ecoinvent.3.10 as mentioned in the LCA report/28/. All emission factor values are detailed in the “Database” sheet of the LCA model. A total of 447 MT of biomass feedstock was accounted in the calculation of <math>E_{\text{biomass}}</math> as verified through the stock in and out records/16/. The total emissions associated with biomass processing for the monitoring period amount to <b>8.09 tCO<sub>2</sub>e</b>. All the sources used in the calculation of biomass processing include the emissions from the transportation and are found acceptable by the assessment team/39/. The weigh scale (CPI-D10) installed in the facility for measuring the incoming feedstock was calibrated on 04/09/2025, which does not cover the whole monitoring period/29/. CO<sub>2</sub> removal supplier has applied discount factor to the data recorded through weighing scale corresponding to the maximum permissible error applicable to the weigh scale and the weight range measured/38/. The applied discount factors for different scales are provided under Appendix 4, citation number 38. A detailed calculation sheet has been provided with the monitored and adjusted values, which are further incorporated into LCA model/39/. The calculations used for the determination of <math>E_{\text{biomass}}</math> sourced from LCA sheet and provided in CORC summary datasheet has been found appropriate by assessment team/28.b/.</p>
<p>Production and operation emissions output (<math>E_{\text{production}}</math>)</p>	<p><b>116.18</b></p>	<p>tonne CO<sub>2</sub>-eq</p>	<p>The emissions from biochar production include those associated with the use of capital goods, and the consumption of electricity, water, diesel, packaging materials, transportation and construction during the production process as verified through the LCA report/26/. Emission factors and activity data for each source are</p>

			<p>documented in the corresponding sheets of the LCA model as per reputed databased Ecovent.3.10. Based on these inputs, the total emissions from the biochar production stage are calculated to be <b>116.18 tCO<sub>2</sub>e</b>. The weigh scales YKVT-K12 and CN-LQC20002 installed in the facility for measuring the quantity of biochar and moisture content of the same through gravimetric method, were calibrated on 04/09/2025, which does not cover the whole monitoring period/29/. CO<sub>2</sub> removal supplier has applied discount factor to the data recorded through weighing scale corresponding to the maximum permissible error applicable to the weigh scale and the weight range measured/38/. A detailed calculation sheet has been provided with the monitored and adjusted values, which are further incorporated into LCA model/39/.</p> <p>The assessment team verified the sources such as quantities related to construction, packaging, machine operation records, electricity bills, fuel logs/39/ used in the calculation of emissions related to production and were found acceptable.</p>
Product distribution emissions output (E <sub>use</sub> )	<b>6.49</b>	tonne CO <sub>2</sub> -eq	<p>The emissions from the usage of biochar account for production of biochar-fertiliser blend, where biochar is mixed with other organic amendments before sale. Emissions under this category include machine operations within the facility for production of biofertilizer, transportation of biochar from the production facility to end users and usage of biofertilizer/39/. Based on the activity data and emission factors included in the LCA model, total emissions from the use phase are calculated to be <b>6.49 tCO<sub>2</sub>e</b>. The sources such as transportation details have been reviewed and verified through the Biochar based fertilizer stock out records/30/, end user agreements/33/ and evidence against input LCA values/39/.</p>
E <sub>stored</sub>	<b>-191.20</b>	tonne CO <sub>2</sub> -eq	<p>The project produced and applied a total of 154.54 metric tons of biochar as verified through the production records/30/. Laboratory analysis determined that the organic carbon content of the biochar was 46.5%, with</p>

			a hydrogen content of 1.95%/34/. The average soil temperature for the project location was determined to be 15°C, based on global datasets for annual mean soil temperature at a depth of 5–15 cm which was verified through the Statement on Soil Temperature data sources/45/. The Estored is <b>-191.20 tCO<sub>2</sub>e</b> . The assessment team verified the calculations in the LCA Model/28/ through evidence provided/39/, which were found acceptable.
Biochar used for which CORCs are claimed	<b>154.546</b>	Dry metric tonnes	The biochar for which the CORCs are claimed has been verified through biochar production records/35/, biofertilizer production and stock out records/30/, end-user agreements/33/, and the LCA model/28/. The application of biochar was also assessed during on site audit/27/.
CORCs issued	<b>60.44</b>	CORCs	The value is correctly calculated based on the total production of biochar during the monitoring period, and cross checked with the LCA calculation sheet/28/ and biochar production and usage logs/30/35/.

Formula CORCS = $E_{\text{stored}} - E_{\text{biomass}} - E_{\text{production}} - E_{\text{use}}$		
$E_{\text{biomass}}$	8.09/154.546	0.05 tonne CO <sub>2</sub> -eq/tonne biochar
$E_{\text{production}}$	116.18/154.546	0.75 tonne CO <sub>2</sub> -eq/tonne biochar
$E_{\text{use}}$	6.49/154.546	0.04 tonne CO <sub>2</sub> -eq/tonne biochar
$E_{\text{stored}}$	1.24/154.546	-1.24 tonne CO <sub>2</sub> -eq/tonne biochar
<b>CORC Factor</b>	<b>60.44/154.546</b>	<b>0.39 CORCs/tonne biochar</b>

### Assessment of Leakage emissions

Paragraph 6.2.1 under Section 6.2 of the Puro Standard General Rules v4.2 states that “the CO<sub>2</sub> Removal Supplier must evaluate leakage following the requirements defined in the applicable methodology” /01/. The VVB notes that leakage emissions are not explicitly quantified as a separate parameter under the Puro Biochar Methodology v3.0 /06/; however, they are addressed implicitly through requirements on sustainable biomass sourcing and system boundary considerations.

Based on the requirements of the Biochar Methodology v3.0 /06/ and the Puro Standard General Rules v4.2 /01/, the VVB confirms that leakage has been assessed in accordance with the applicable methodology and is adequately addressed within the methodology boundary. The additional leakage risk is considered negligible; therefore, no separate quantification of leakage emissions is required

## 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 "SEEK Biochar in Shanghai" facility meets the requirements outlined in the Puro Standard General Rules Version 4.2 for a production facility and output audit. We confirm that the Puro Biochar Methodology Edition 2022 version 3 has been correctly applied for output and CO<sub>2</sub> 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 in facility and output audit for the monitoring period 18<sup>th</sup> May 2025 to 31<sup>st</sup> August 2025 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. The biochar produced at SEEK Biochar facility is mixed with other organic constituents and sold as biofertilizer with final use as soil amendment in agricultural fields. Although, the current monitoring period is validated and verified as per the requirements outlined in the Biochar Methodology edition 2022, v.3, the recent version of methodology i.e. Biochar Methodology edition 2025, v.2/69/ was also referred to assess the reversal risks of carbon stored in the biochar. The reversal risks of the organic carbon contained in the biochar were ensured through confirming the declared use in agricultural soil (usage ID AF2)/33/69/, evidence of biofertilizer delivery to end users intended to use biochar in soil/30/, and biochar content below 50% in the final biofertilizer content/30/. Based on the evaluated information, we affirm that the emission removals for the first monitoring period from 18<sup>th</sup> May 2025 to 31<sup>st</sup> August 2025, amount to 60.44 CORCs.

Therefore, Earthood Services Limited confirms the production facility's capability to effectively remove CO<sub>2</sub> and the requirements of the Production facility audit are met as per the Puro Standard General Rules version 4.2 and Biochar Methodology Edition version 3. Thus, Earthood requests the issuance of CORCs for the first monitoring period (18/05/2025 – 31/08/2025) under first crediting period (18/05/2025 – 17/05/2030).

## 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	
<p>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 must not be used in applications that destroy its carbon storage, e.g. fuel or reductant uses.</p>	<ol style="list-style-type: none"> <li>The amount of biochar applied is verified through the biochar-based fertilizer stock out records and sample invoices/30/. The biochar delivery slips and usage records for the period 18<sup>th</sup> May 2025 to 31<sup>st</sup> August 2025 have been provided by the removal supplier. The LCA model has been developed using data from the same time period.</li> <li>Soil application pictures and videos- Geotagged and time stamped/32/.</li> <li>End-user agreements demonstrating the intended application of biochar by the end-user as a soil amendment/33/.</li> <li>Physical site visit to the site of application. The biochar is applied to the farms and interviews were held</li> </ol>	<p>The time stamped and geotagged photographs of soil application of biochar-based fertilizer/32/ confirm that the biochar is used in application that preserves its carbon storage property.</p> <p>The soil application of biochar was also observed during onsite audit and interviews with end user farmers/27/ which confirms that the biochar is used as soil additive in the farms.</p> <p>Therefore, the assessment team confirms that the biochar is being used in application that preserve its carbon storage properties.</p>	Y

	with the end users of the farms/27/.		
<p>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.</p>	<p>1. Waste Biomass such as urban green cuttings are used as feedstock for the biochar production. Purchase contracts with suppliers confirming that the biomass feedstock, namely urban green cuttings in the current monitoring period, originates from the landscaping branches/15/, along with SEEK stock in and stock out records/56/.</p> <p>2. A physical site visit to verify the existence of waste incoming to the facility where the landscaping tree branched as urban green cuttings were processed in the biochar facility/27/.</p>	<p>The biomass feedstock is an urban wood waste sourced from SEEK’s biomass supplier SEEK Environmental Technology (Shanghai) Co. Ltd. This is verified through purchase contract/15/ indicating the origin of the feedstock. Furthermore, the personnel from biomass supplying entity was engaged during stakeholder discussions conducted as part of the physical on-site visit/27/ to confirm the source and procedures adopted for biomass collection and transportation. Therefore, the assessment team confirms that the biochar is produced from waste biomass.</p> <p>As per Puro.Earth biomass sourcing criteria, the sourced biomass in the current monitoring period is urban green cuttings which are categorized under category D “Green waste/05/. The same biomass feedstock is</p>	Y

		included under EBC's positive list of biomass feedstock and categorized under ID R-01/64/.	
<p>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).</p>	<p>1. Life Cycle Assessment report of Biochar/26/ by SEEK Biochar facility in line with:</p> <ul style="list-style-type: none"> <li>- ISO 14040:2006 (Environmental management – Life cycle assessment – Principles and framework, 2006)</li> <li>- ISO 14044:2006 (Environmental management – Life cycle assessment – Requirements and guidelines, 2006)</li> <li>- Puro. Earth biochar methodology version 3 (Puro. Earth, 2022)</li> </ul> <p>2. LCA calculation sheet /28/</p>	<p>The supplier has submitted a Life Cycle Assessment (LCA) report for SEEK biochar production and application, providing information on emissions arising at different stages of operation. The report covers emissions data for each stage of production and application over the period May 2025 to August 2025, with data collected during the same monitoring period. The assessment team has cross-verified the input values in the calculation sheet against the supporting evidence provided by the project developer/39/ and confirms that the net-negative emissions are accurately represented. The reporting is consistent with the requirements of ISO 14040 and the applied methodology/6/, as</p>	<p>Y</p>

		explicitly stated in Section 1 of the report. Accordingly, the requirement is deemed to be met.	
<p>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</p>	<ol style="list-style-type: none"> <li>1. No cofiring is observed in the retorts at the plant site during the on-site visit /27/ and also through the process diagram of the production process/31/.</li> <li>2. The LCA calculation sheet accounts for the combustion of diesel fuel /28/.</li> </ol>	<p>During the on-site visit, it was confirmed that there is no co-firing of fossil fuels and biomass in the same reaction chamber. There are different chambers for the heating up the furnace and the biomass. There is a syngas purifier, cyclone dust collector to collect the flue gas to avoid its emissions to the surroundings. This was verified during the on-site visit/27/, process flow diagram of production process/31/ and Puro Environmental Evaluation report/14/. The greenhouse gas emissions associated with other usage of fuels are accounted in the LCA sheet/28/. Thus, the requirement is met.</p>	Y
<p>1.1.5. In the biochar production process, the pyrolysis gases must be combusted or recovered</p>	<p>1.The syngas generated from the carbonization furnace is conveyed through pipelines to the</p>	<p>The retort is designed to redirect syngas for combustion, thereby preventing its release</p>	Y

<p>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.</p>	<p>9# cyclone dust collector, where the separated fine particulates are returned via enclosed pipelines to the carbonization rotary furnace for further pyrolysis. The treated exhaust gas then flows through two successive treatment units, the cyclone spray tower followed by the ionization tower before being ultimately released through exhaust stack which was verified through the process flow diagram/31/ and the on-site visit/27/. 2. EIA report of SEEK Biochar facility/11/</p>	<p>into the atmosphere. Through the on-site audit /27/, it was verified that a syngas purifier and a cyclone dust collector have been installed to capture flue gas and prevent its emission to the air. The collected flue gas is redirected into a separate chamber of the carbonization furnace, where it undergoes combustion and is subsequently passed through a cyclone spray tower and ionization tower. The level of emissions from treated flue gas were assessed during EIA assessment and provided in the EIA report/11/. SEEK biochar facility has been granted EIA approval issued by Ecology and Environment Bureau of Jinshan District, Shanghai Municipality, which confirms the appropriateness of the air filtration system and compliance with regional regulations for air emissions <a href="#">“DB31/933-2015 Integrated emission standards of air</a></p>	
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		<p><a href="#">pollutants- Shanghai”</a> /11/.</p> <p>Accordingly, the requirement is deemed to be met.</p>	
<p>1.1.6. The biochar produced must have a molar <math>H/C_{org}</math> ratio lower than 0.7. The <math>HC_{org}</math> 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</p>	<p>Biochar Analysis Report of all three batches produced in the current monitoring period confirms that the average molar Hydrogen-to-Organic carbon ratio of the biochar is 0.5/34/.</p>	<p>The molar <math>H/C_{org}</math> ratio was lower than 0.7, therefore the biochar produced is considered of suitable quality as per the biochar qualitative analysis reports/34/. Thus, the requirement is met.</p>	Y
<p>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 words, the biochar produced must be legal to use in the manner proposed.</p>	<p>The biochar based fertilizer analysis report certifies that the biofertilizer from SEEK Biochar facility is compliant with the standard requirements and the testing standards applicable to use in the jurisdiction/34/.</p>	<p>The biochar produced by SEEK is not applied to soil as a standalone product but is used as an ingredient for the production of biochar based organic fertilizer which is further applied to agricultural soils. The biochar-based fertilizer tested by College of Life Science and Technology, Huazhong Agricultural University., is found compliant against the industry standard NY/T 3618-2020: Biochar-based organic fertilizer confirming the safe use of the product in</p>	Y

		agricultural applications to soil, as confirmed through biofertilizer analysis reports/34/.	
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	<ol style="list-style-type: none"> <li>1. On-site observations /27/</li> <li>2. Puro Environmental Evaluation Report SEEK /14/</li> <li>3. Puro Environmental and Social Safeguards Questionnaire SEEK/13/</li> <li>4. SEEK Jinshan EIA Report/11/</li> <li>5. SEEK Jinshan EIA Report Approval/11/</li> <li>6. Protocol for safe handling of biochar/23/</li> <li>7. Safe operation protocol of production equipment /46/</li> </ol>	<p>Potential emissions and associated pollutants have been identified, with appropriate mitigative measures in place as discussed in the <i>Puro Environmental Evaluation Report/14/</i>. Occupational health and safety measures have also been implemented within the facility, as discussed in the <i>Puro Environmental and Social Safeguards Questionnaire/13/</i>.</p> <p>These environmental and safety measures are considered effective in controlling emissions and ensuring safe operations and confirmed through SEEK's safety protocols for safe handling of biochar and operation protocol of production equipment established for all employees/23/46/. The safety protocols were reviewed to verify information on the substance's hazards,</p>	Y

		<p>safe handling, storage, stability, reactivity, and emergency measures. The fire safety procedures and mitigation measures at different stages of production within the facility are appropriately outlined in the Safe Operation Protocol of Production Equipment/46/ and Protocol for safe handling of biochar/23/. Further, during onsite audit it was confirmed that the safety instructions along with symbols were posted throughout the facility/27/. Thus, condition is met.</p>	
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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	The assessment team conducted an On-site Production Facility Audit/27/.	The assessment team confirms that the production facility is in compliance with the Puro Standard General Rules (version 4.2)/01/, Additionality Assessment Requirements (version 2.0)/03/, Stakeholder Engagement Requirements (version 1.1)/04/, and Puro	Y

<p>methodology (section 1.1.), and the Proofs and evidence needed from the CO<sub>2</sub> Removal Supplier (section 5).</p>		<p>Biochar Methodology/06/, as detailed in Section 2 of this report.</p>	
<p>1.2.2. The CO<sub>2</sub> 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</p>	<ol style="list-style-type: none"> <li>1. Puro Environmental Evaluation report/14/</li> <li>2. Stakeholder Engagement Report/12/</li> <li>3. Environmental and Social Safeguard questionnaire /13/</li> <li>4. Protocol for safe handling of biochar /23/</li> <li>5. Safe operation protocol of production equipment/46/</li> <li>6. EIA Report/11/</li> <li>7. EIA Approval/11/</li> <li>8. Service Contract with Waste Disposal Agency/17/</li> </ol>	<p>The documents submitted by the supplier demonstrate that the production facility complies with local environmental and social regulations, and that stakeholder engagement was undertaken alongside the EIA report. The Environmental Impact Evaluation Report/14/ lists the probable emissions from the production process and outlines the corresponding mitigative measures for emission control and avoidance.</p> <p>During the on-site assessment, stakeholders who participated in the August 2025 stakeholder meeting and the residents from nearby villages were interviewed. The assessment team verified the medium of communication used for the meeting, the topics discussed, and the</p>	<p>Y</p>

		<p>grievance-handling mechanism/27/.</p> <p>Through the Safe operation protocol of production equipment/46/, it was verified that provisions for emergency preparedness, safety, biochar handling, and job operating procedures were in place. The protocol for safe handling of biochar /23/ further confirmed that adequate systems exist for the safe handling of biochar within the facility. In addition, waste treatment service agreement/18/ confirmed that by-products such as waste oil, packaging, waste liquid etc. are collected and managed in accordance with regulatory requirements.</p> <p>Interactions with local community members confirmed that no significant environmental harm has resulted from the operations of the production facility/27/. These plans and procedures were reviewed and discussed during the on-site audit, and interviews with facility personnel further verified their implementation during the site visit/27/.</p>	
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<p>1.2.3 The CO<sub>2</sub> Removal Supplier shall be able to demonstrate additionality, meaning that the project must convincingly demonstrate that the CO<sub>2</sub> 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<sub>2</sub> 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.</p>	<ol style="list-style-type: none"> <li>1. Financial spreadsheet of SEEK Biochar Facility/62/</li> <li>2. SEEK Biochar Facility – Puro Earth Baseline and Additionality Assessment Questionnaire /36/</li> </ol>	<p>The CO<sub>2</sub> removal suppliers have demonstrated financial additionality through Investment analysis according to the CDM Tool 27 Investment Analysis/37/ and Puro Additionality Assessment Requirements/03/.</p> <p>The CO<sub>2</sub> removal supplier has appropriately filled in the Baseline and Additionality Assessment Questionnaire/13/, disclosing the cost structure of the capital and operational expenditure, providing all evidence documentation of the pyrolysis and processing equipment purchase contract, operation and maintenance costs, material costs, labour expenses and the production costs/62/.</p> <p>The assessment team confirms that investment analysis is the appropriate method to demonstrate additionality since project aims to generate income from biochar sales and the carbon finance will help in recovering the investment costs, biochar production costs, O &amp; M costs. Through sensitivity analysis</p>	<p>Y</p>
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		<p>performed as part of the Investment analysis, the impact of key variables was assessed and none of the assessed combinations yield financially attractive scenario without carbon finance.</p> <p>The IRR benchmark selected for demonstration of additionality is appropriately selected in line with the CDM Tool 27/37/. The financial model projects a net cash inflow of [REDACTED] with revenues from CORCs and biochar when sold at the price of [REDACTED] and [REDACTED] respectively, with a total of [REDACTED] project returns. However, in absence of revenues from CORCs, but selling biochar at [REDACTED], the total cash inflow of the project reached to [REDACTED], with [REDACTED] project returns. This was verified through the IRR sheet and the sources of each of the financial parameter was confirmed through the corresponding documents/62/.</p>	
<p>1.2.4. The Production Facility Auditor checks that the Production</p>	<p>1. Biochar end-user agreements/32/</p>	<p>The operational logs of the SEEK Biochar production facility confirming the</p>	<p>Y</p>

<p>Facility is capable of metering and quantifying the biochar output in a reliable manner, for the Quantification of CO<sub>2</sub> Removal (section 4). This check also prepares the CO<sub>2</sub> Removal Supplier for producing the periodic Output Report</p> <p>-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.)</p> <p>-Relevant meters are in place and they are calibrated</p> <p>-The emissions from cultivation, harvest and transportation of the biomass are estimated and calculated in a reliable manner (section 4.3.)</p> <p>-The material and energy use of the Production Facility can be quantified and the emissions from the process calculated (section 4.4.)</p> <p>- The emissions from biochar post-</p>	<ol style="list-style-type: none"> <li>2. Biomass purchase agreements/30/</li> <li>3. Biomass (tree branches) stock in records/16/</li> <li>4. Biochar and biofertilizer production records/35/30/</li> <li>5. Biofertilizer sales invoices/30/</li> <li>6. Meters and Manufacture specifications/38/</li> <li>7. Calibration requirements/40/</li> <li>8. LCA report and assessment sheet/26/.</li> <li>9. Energy and Mass balance sheet/63/</li> </ol>	<p>quantity of biomass consumed, and biochar produced has been shared with the assessment team.</p> <p>The production of first biochar batch started on 18/05/2025 as evident from the biochar production records/35/ and confirmed during on site audit through manual records of biomass consumed in the facility/27/. The audit report for the first facility audit therefore accepts the same as the production date.</p> <p>The weighing scales in the production facility weigh the final product - biochar/38/41/. There is proper documentation of the incoming feedstock (tree branches), production records of biochar, biochar used in the biochar-fertiliser blend, which is documented in the production records and confirmed through biofertilizer contract and delivery receipts/30/ end-user agreements/33/ and also confirmed during the on-site assessment/27/.</p> <p>Section 4.3: No emissions are reported from the cultivation, harvesting, of the biomass, as the</p>	
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<p>processing, transportation, and use are estimated and calculated in a reliable manner (section 4.5.)</p> <p>-The auditor goes through the Quantification of CO<sub>2</sub> Removal requirements with the CO<sub>2</sub> Removal Supplier, so that the Supplier is able to calculate the CO<sub>2</sub> Removal independently in its Output Report.</p>		<p>feedstock is an urban wood waste sourced through suppliers. However, emissions related to transportation of the biomass to the project facility have been duly accounted for and are clearly documented in the LCA report/26/28/.</p> <p>Section 4.4 &amp; 4.5: The sources of the emissions of biochar production, transportation, pyrolysis and the associated mass and energy balance sheet has been provided by the supplier to the assessment team, the input values are found traceable and cross-checked through stock in and out records of facility, production logs, moisture meter records, machine operation logs, electricity consumption logs etc./39/ maintained onsite and shared to assessment team. The source of evidence provided to the assessment team regarding the emissions in the LCA model have been reviewed and found acceptable/28/39/.</p>	
<p>1.2.5. Collection of standing data of the Production Facility. The Production Facility</p>	<p>- Business License of SEEK/9/</p>	<p>The SEEK Bio-Technology (Shanghai) Co. Ltd., attains a valid business licence/9/ and an EIA approval</p>	<p>Y</p>

<p>Auditor collects and checks the standing data of the Production Facility and the CO<sub>2</sub> Removal Supplier.</p>	<ul style="list-style-type: none"> <li>- Environmental Approval of SEEK Biochar facility/11/</li> <li>- Biochar production records, Biochar based fertilizer usage records, Biochar based fertilizer end user agreements /30/33/35/</li> <li>- A physical site visit to the facility to confirm the location/27/</li> <li>- Environmental and Social Safeguard questionnaire /13/</li> <li>- Safe operation protocol of production equipment /46/</li> </ul>	<p>certificate/11/, which makes the facility legally eligible to produce biochar. There is documentation on the social and environmental safeguards as verified through the documents- Safe operation protocol of production equipment/46/, protocol for safe handling of biochar /23/ and EIA report/11/. Through the data obtained during the monitoring period, the verified biochar produced and used during this period (which was also accounted in LCA) was found to be 154.54 tonnes.</p>	
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Section 5.2 Biomass Production and supply			
Requirement	Verification Method	Verification remarks	Requirement met
<p>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.</p> <p>In the case of other non-forest waste biomass:</p> <ul style="list-style-type: none"> <li>-Raw material needs to be sourced sustainably; however, certificates</li> </ul>	<ul style="list-style-type: none"> <li>- Purchase contracts of tree branches/62/</li> <li>- A physical site visit to verify the existence of urban waste in the region where the production facility is located/27/</li> </ul>	<p>Biomass, comprising urban waste such as tree cuttings, is sourced as landscaping waste, confirmed through purchase contracts of tree branches/62/. The contractual agreement with the waste supplier confirms the compliance with local laws and regulations ensuring the sustainable collection of</p>	<p>Y</p>

are not needed, as it is waste material.		waste. Therefore, the condition is met.	
5.2.2 Lifecycle assessment data for the biomass production and supply must be provided and documented	- LCA Report/26/ - LCA model/28/	The LCA calculation sheet/28/ is reviewed, and calculations are demonstrated in a retraceable manner. Therefore, the condition is met.	Y

### Section 5.3 Biochar Production

Requirement	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	<ul style="list-style-type: none"> <li>Biochar production records/35/</li> <li>Biofertilizer production records/30/</li> <li>Technical specifications of Equipment/38/40/</li> <li>Biofertilizer delivery invoices/30/</li> <li>Puro's LCA Model/28/</li> </ul>	The biochar production records/35/, biofertilizer production records/30/ and delivery invoices/30/ confirms the mass of biochar produced within the facility which can be clearly traced back in the CORC summary sheet and LCA sheet/28/. The assessment team confirms that the biochar production and reporting requirements have been met.	Y
Section 5.3.2 The biochar producer must, at a minimum, provide the following data on the amount of biochar produced:	<ul style="list-style-type: none"> <li>Biochar production records for monitoring period/35/</li> <li>Water consumption records/24/</li> </ul>	The details of the biochar production records have been presented under paragraph 1.2.4 above. These records have been verified against the	Y

<p>i. Continuous load cell measurement of the biochar production for the whole period</p> <p>ii. Water input measurement</p>	<ul style="list-style-type: none"> <li>Biofertilizer delivery invoices/30/</li> </ul>	<p>production data reported for the current monitoring period. Furthermore, the water consumption invoices have been provided for whole facility consumption rather than the carbonization workshop. Accordingly, the water consumption within the carbonization workshop was estimated in the LCA model/28/. The SEEK biochar facility use water in the spraying tower and cooling tower for syngas pretreatment and biochar cooling.</p>	
<p>Section 5.3.3</p> <p>Life cycle assessment data for the biochar production</p>	<p>LCA sheet /28/</p>	<p>The LCA calculation sheet/28/ is reviewed, and calculations are demonstrated in a retraceable manner.</p>	<p>Y</p>
<p>Section 5.3.4</p> <p>Biochar laboratory analysis - total organic carbon content, total hydrogen content, and calculated <math>H/C_{org}</math> ratio</p>	<p>Biochar Analysis reports /34/</p>	<p>The biochar produced contains the <math>H/C_{org}</math> ratio less than 0.7 and thus meets the EBC criteria/34/.</p>	<p>Y</p>
<p>Section 5.3.5</p> <p>Analysis for presence of PAHs and heavy metal content</p>	<p>Biofertilizer analysis report/34/</p>	<p>The PAH analysis of the biochar is not conducted as the biochar produced by SEEK is not applied to soil as a standalone product but is used an ingredient for the production of biochar</p>	<p>Y</p>

		<p>based organic fertilizer which is further applied to agricultural soils. The biochar based fertilizer is tested and found compliant against the industry standard NY/T 3618-2020: Biochar-based organic fertilizer confirming the safe use of the product in agricultural applications to soil/34/.</p>	
<p>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</p>	<ol style="list-style-type: none"> <li>1. Standard Operating Procedures (SOP) - Biochar sampling and testing/53/</li> <li>2. Protocol for soil temperature selection/53/</li> </ol>	<p>The sampling procedure for the production facility includes:</p> <p><b><u>Sampling Procedures:</u></b></p> <p>Sampling of biochar is conducted twice per shift (day and night), with defined collection times to ensure representative sampling over a 24-hour period. Approximately 650 g of biochar is collected from the discharge point using clean, airtight plastic bags while wearing gloves to avoid contamination. The sealed and labelled samples are promptly sent to the laboratory, where four daily samples are processed at a fixed time each day for moisture content</p>	<p>Y</p>

		<p>determination. This was verified by the SOPs on biochar sampling provided by the CO<sub>2</sub> removal supplier/53/.</p> <p>In addition, biochar samples are periodically sent to a CMA (China Metrology Accreditation) qualified external laboratory for independent testing of relevant technical, accounting for seasonal variations and fluctuations in feedstock characteristics and operating parameters/53/.</p> <p>This was verified through the SOP for biochar sampling and the biochar testing methods provided by the CO<sub>2</sub> removal supplier/53/.</p>	
<p>Section 5.3.7</p> <p>The CO<sub>2</sub> Removal Supplier must comply with local environmental regulations, with respect to emissions of pollutants to air, water, and soil.</p>	<ul style="list-style-type: none"> <li>- EIA approval certificate/11/</li> <li>- Pollutant discharge permit/17/</li> </ul>	<p>The project is in compliance with the local environmental regulations as demonstrated in the EIA approval certificate/11/, and Pollutant discharge permit /17/.</p>	Y

Section 5.4 Biochar Use			
	Verification Method	Verification remarks	Requirement met

<p>5.4.1. Life cycle assessment data for the biochar use must be provided and documented.</p>	<p>LCA report summary/25/</p>	<p>The Life cycle assessment data for the biochar use has been provided and documented.</p>	<p>Y</p>
<p>5.4.2. Proof that the end-use of the product does not cause CO<sub>2</sub> 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, documentation of the sale or shipment of the product, indicating the intended use of the product</p>	<p>-Soil application photographs/32/ -End-user agreement with Biochar end-users/33/ - Biofertilizer contracts /30/</p>	<p>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, landfill/mine absorber, soil additive). The project activity uses biochar as the soil additive as verified from the soil application pictures and physical on-site visit observation where application of biochar into soil was confirmed/27/. This was further verified through the end-user agreements, which confirmed that the biochar and biochar blends were applied exclusively to soil/33/.</p>	<p>Y</p>
<p>5.4.3. Justification on the soil temperature selected for the</p>	<p>- Description of the procedures for</p>	<p>The average soil temperature for the project location was</p>	<p>Y</p>

calculation of the biochar carbon sequestration	obtaining soil temperatures/45/	determined to be 15 °C, based on global datasets for annual mean soil temperature at a depth of 5–15 cm which was demonstrated under Statement on Soil Temperature data sources/45/ and verified from peer reviewed research/65/.	
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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 is provided by Puro during the output audit. The facility ID issued by Puro is 469599.	This has been verified through the facility registration details provided by Puro.	Y
5.5.2 A statement is needed from the CO <sub>2</sub> Removal Supplier that	Statement of understanding of	The biochar-based fertilizer is transported	Y

<p>the underlying physical product (biochar) in which the CO<sub>2</sub> is stored will not be sold or marketed as “climate positive” if the CO<sub>2</sub> removal certificate associated with the underlying physical product (biochar) is removed from the underlying product and sold to another stakeholder not associated with the underlying physical product.</p>	<p>physical product decoupling/49/</p>	<p>directly from the production facility to the application site without marking as “climate positive”. This was confirmed through physical inspection of biofertilizer packets during onsite audit/27/52/. This was further verified through the biofertilizer contracts/30/.</p>	
<p>5.5.3. Check of the packaging of the product (how the product is branded) is needed, if CO<sub>2</sub> removal certificate associated with the underlying physical product (biochar) is removed from the underlying product</p>		<p>This arrangement eliminates any possibility of the biochar being re-associated with the underlying physical product. The “Statement of understanding of physical product decoupling”/49/</p>	
<p>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<sub>2</sub> removal certificate has been sold to and accounted by another stakeholder not</p>		<p>and biofertilizer contracts/30/ confirm that the end-user will not be involved in the marketing of the end-product for carbon removal claims. Therefore,</p>	

<p>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<sub>2</sub> removal certificate</p>		<p>the relevant requirements are met.</p>	
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**APPENDIX 2: AUDIT FINDINGS**

**Table 1. CL from current assessment**

CL ID	01	Section no.	Date : 08/09/2025
<b>Description of CL</b>			
<p>Reference:            1. Puro_CORC Report_Summary/Tab-Biochar Batch Records            2. Biochar elemental analysis Reports 01/02/03            3. Puro Biochar Methodology 2022 v.3</p> <p>Observations:            1. The biochar qualitative analysis shows substantial variations in the carbon content of the different batches of the biochar produced.            2. Para 1.1.7 of applied methodology states <i>“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 words, the biochar produced must be legal to use in the manner proposed”</i>.            The elemental analysis reports of biochar batch 1 and 2, does not specify heavy metal composition, PAH content, qualification criteria for biochar to be used in agricultural applications.</p> <p>Action Required:            1. PP shall clarify and justify the variations observed in the carbon content of the biochar batches produced in the current monitoring period.             2. PP shall further clarify how the biochar produced within the facility complies with requirement outlined under para 1.1.17 of the methodology and qualifies the criteria for use in soil applications.</p>			
<b>Project participant response</b>			<b>Date : 11/02/2026</b>
<p>1. The following factors contributed to observed variations in carbon content in different biochar batches:            - <b>Feedstock leaf content:</b> Although all three batches used tree branches as feedstock, the proportion of adhered leaves varied between batches, and leaves and woody branches have marked differences in chemical composition.</p>			

- **Pyrolysis reactor temperature:** While temperature was relatively stable within each batch, differences were observed between batches.

2. The biochar was blended with other materials for soil applications rather than used independently. The applicable regulation existing in the jurisdiction for biochar-based fertilizer is the industry standard NY/T 3618-2020 (*Biochar-based organic fertilizer*). According to the standard, the indicators include total nutrients (N+P<sub>2</sub>O<sub>5</sub>+K<sub>2</sub>O), pH, As, Hg, Pb, Cd, Cr. The test report confirms compliance in all these indicators. While this approach constitutes a deviation from the standard, Puro.earth has viewed it as valid.

**Documentation provided by project participant**

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**WVB assessment**

**Date: 16/02/2026**

1. PP has clarified that the variations in biochar characteristics pertains to the varied proportions and type of leaves adhered with the tree branches used as the biomass feedstock. The assessment team, during onsite audit physically assessed the raw biomass feedstock stored in the facility premises and confirmed the variations in the tree branches with respect to the density of the leaves and diversity of the plant species. PP has further clarified that there were minor differences in the pyrolysis reactor temperature among all three batches of the biochar produced. The assessment team during onsite audit checked the operational records of the pyrolysis equipment and noted the minor variations in the operating pyrolysis temperatures of all three batches. The clarification provided by PP is deemed appropriate by assessment team. Closed.

2. The biochar produced by SEEK is not applied to soil as a standalone product but is used as an ingredient for the production of biochar based organic fertilizer which is further applied to agricultural soils. The biochar based fertilizer is tested and found compliant against the industry standard NY/T 3618-2020: Biochar-based organic fertilizer confirming the safe use of the product in agricultural applications to soil. The clarification provided by PP is deemed appropriate by assessment team. Closed.

CL ID	02	Section no.	Date : 08/09/2025
<b>Description of CL</b>			
<b>Reference:</b> Tree branches stock-in records.xlsx Summary of biochar production data.xlsx Puro LCA Model			
<b>Observations:</b>			
1. Processing capacity of shredder is mentioned as 30 tonnes/hour under LCA Model/Tab-LCI/Cell-E60. However, the source of this parameter is not provided in the LCI sheet and is not available in the purchase agreement of the equipment. PP shall provide the data source for this parameter.			
2. In the LCA model and Biochar production data sheet, the electricity consumption is reported as 76,240 kWh. The electricity consumption data could not be verified as monitoring and source of this data is unclear. PP shall provide the supportive evidence to substantiate the quantity of electricity consumed within current monitoring period. Further, the electricity consumption values considered for construction period are also not supported by any supportive evidence. PP shall substantiate the data for electricity consumed during construction period.			
3. The quantity of reactor startup biomass fuel is quantified for all three batches in the current monitoring period, which totals to 6,515 Kgs. The source of this data is mentioned as "Summary of biochar production data" in the LCI tab of LCA model. The values pertaining to this parameter are punched in values which could not be traced back to the data source. PP shall provide the supportive evidence to substantiate the quantity of biomass fuel used within the current verification period.			
4. The LHV of biomass is considered as 0.018 TJ/t and the data source is mentioned as "calculated". However, the value is a punched in value without any calculation demonstrated for the same. PP shall provide the appropriate data source for the parameter.			

5. The values considered for the reinforcing steel and refractory fireclay in the production equipment in Carbonization workshop are punched in values. Thus, the data source of these values in the sheet is unclear. PP shall demonstrate the quantification and provide the data source used.

Construction materials used for the production equipment in the Carbonization Workshop		
Reinforcing steel	tonnes	220
Refractory fireclay	tonnes	300

6. The LCA model under audit does not include inputs for CH<sub>4</sub> emissions during biochar production but does include a calculation for N<sub>2</sub>O emissions based on guidance used from Puro’s most recently published biochar methodology (Edition 2025). PP shall revise the LCA model to include a similar module for CH<sub>4</sub>, even if it is set to 0 so that if GHG emissions testing is required for this audit or future audits, that it can be added without the need to revalidate the LCA model.

<b>Project participant response</b>	<b>Date : 11/02/2026</b>
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1. The processing capacity of 30 tonnes/hour is provided by the shredder supplier. Refer to the statement from the supplier.

2. The electricity consumption applied in the LCA calculation is supported by the PDF “Electricity meter reading records” and the Excel “Electricity meter reading records and calculation”. In the tab “Electricity for biochar batches” of the Excel spreadsheet, the electricity consumption for each of the batches totaled up to 76,240 kWh.  
The procedure for determination of the electricity consumption for biochar production was orally explained to the auditor during the site visit. The supporting documents contain the same procedure in a structured manner.

The electricity consumption values for the construction period are supported by the corresponding power bills/payment records for those months of construction, which have now been provided. These electricity consumption values are aggregated in the updated “Summary of embodied materials and electricity of capital goods”.

3. The original source of 6,515 kg is the handwritten “Feedstock weighing records” maintained by on-site operators. These records capture both the main feedstock input weights and the biomass fuel consumed for reactor startup. The startup biomass fuel consists of tree branches and bamboo powder, with the following breakdown:  
Batch 1: 765 kg of tree branches and 1,575 kg of bamboo powder  
Batch 2: 585 kg of tree branches and 1,480 kg of bamboo powder  
Batch 3: 605 kg of tree branches and 1,505 kg of bamboo powder  
These values summed up to 6,515 kg which was then applied in the calculation.

4. The data source for 0.018 TJ/t as LHV of biomass was mislabelled as “calculated”; instead, it was from an official source available from this link below:  
[https://ljj.hunan.gov.cn/xxgk\\_71167/gzdt/gndt/201711/t20171117\\_4699807.html](https://ljj.hunan.gov.cn/xxgk_71167/gzdt/gndt/201711/t20171117_4699807.html)  
The table shows that the dry-basis heating values of different tree species are between 15.3 kJ/g to 20.8 kJ/g, i.e., 0.0153 to 0.0208 TJ/t. And 0.018 TJ/t is the average value of the upper and lower limits.

5. The equipment supplier provided a list of components and materials detailing the steel and refractory brick weight for the carbonization production line.

6. The LCA model has been revised to include inputs for CH<sub>4</sub> emissions during biochar production.

<b>Documentation provided by project participant</b>
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*In the folder CL ID 02:*

- Statement from Shredder Supplier
- Sub-folder "Capital goods", updated from the previous submission. This sub-folder contains:
  - Construction invoices 01 to 11, which are the same as those previously submitted
  - Statement from Xinjun, the company responsible for constructing the building structures and the purchaser under construction invoices 01 to 11
  - High-voltage line and low-voltage line power bills or payment records that cover the construction period
  - Supplier's list regarding steel and refractory brick
  - Summary of embodied materials and electricity of capital goods, updated from the previous submission

The following documents are also provided and placed in the sub-folder "Measuring devices" as part of the documentation for CAR ID 03

- Electricity meter reading records
- Electricity meter reading records and calculation

Additionally, the revised "Puro\_LCA Model\_Biochar\_SEEK 469599" is placed in a separate folder named "LCA, CORC & associated documents"

## VB assessment

Date: 16/02/2026

1. The different operational components in the SEEK biochar facility are comprised of customized design and do not contain standardized set of technical specifications. PP has provided a declaration from the shredder supplier stating the biomass processing capacity of the shredder installed in the facility which is 30 tonnes/hour. Since there is no standard set of technical specifications available, the evidence provided by PP is deemed appropriate by assessment team. Closed.

2. The electricity consumption data during facility operations has been calculated through different sub meters installed within the facility premises designated for the operations pertaining to biochar production. PP has provided a detailed sheet demonstrating the calculation of electricity consumption during operations supported by manual recording of submeter readings and electricity invoices by regional electricity distributor. Since there were no separate invoices for the submeters to verify the exact quantity of electricity consumption data, PP has applied a factor of 3% to the calculated electricity consumption values as a conservative approach. The calculation approach adopted by PP for the electricity consumption values is deemed appropriate by assessment team.

The electricity consumption values during construction period were calculated by allocating a factor of 8.5% to the quantity of total electricity consumed during construction of whole facility. The allocation factor is calculated as per the ratio of total area and area assigned to carbonization workshop. PP has further provided the electricity invoices of the period during construction phase to substantiate the quantity of electricity consumed. The calculation approach is deemed appropriate by assessment team. Closed.

3. PP has clarified that the data source for reactor startup biomass fuel is "Feedstock weighing records" wherein the quantity of startup fuel biomass (tree branches and bamboo powder) is written on the sheets for respective batches. The assessment verified the data source and confirmed that the applied values are correct. Closed.

4. The value for parameter LHV of biomass feedstock is sourced from Hunan Provincial Forestry Department ([https://lyj.hunan.gov.cn/xxgk\\_71167/gzdt/gndt/201711/t20171117\\_4699807.html](https://lyj.hunan.gov.cn/xxgk_71167/gzdt/gndt/201711/t20171117_4699807.html)). The applied value is the average of calorific values of different tree species found in the region. Since, the biomass feedstock is comprised of varying tree species, the applied average value is deemed appropriate by assessment team. Closed.

5. PP has provided the detailed breakup of steel and refractory fireclay used in the construction of carbonization workshop, issued by equipment supplier. The quantity was further cross verified with the invoices generated by equipment supplier. The input values for steel and fireclay bricks is deemed appropriate by assessment team. Closed.

6. The LCA model has now been revised with inputs for CH<sub>4</sub> emission quantification during biochar production, which is in line with Puro LCA requirements. Closed.

CL ID	03	Section no.	Date : 08/09/2025
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**Description of CL**

**Reference:**

Financial Analysis sheet  
Baseline and Additionality Questionnaire

**Observations and Action Required:**

1. The investment analysis applies an IRR benchmark derived from a report published in 2013, whereas the project commitment and investment decision occurred in 2023.

Please clarify how the use of a 2013 dated benchmark remains representative of market conditions, investor return expectations, and risk profiles prevailing at the time of investment decision (2023). In particular, please justify its continued applicability considering potential changes in macroeconomic conditions, financing costs, sector-specific risks, and investor return expectations between 2013 and 2023, or alternatively provide more recent supporting evidence confirming that the selected benchmark remained valid at the time of investment.

2. The input cost of biochar is considered as [REDACTED]. However, as per the sales invoice of fertilizer, the per ton cost of fertilizer is [REDACTED] with 18% biochar, which leads to around [REDACTED] as cost of biochar. PP shall clarify the basis of biochar cost estimation for the investment analysis and provide supportive evidence for the same.

3. The input quantity and costs of biomass feedstock is mentioned as:

Amount of Feedstock 1 (rice straws)	t/year	18,500
Amount of Feedstock 2 (branches)	t/year	3,100
Unit price of Feedstock 1 (rice straws)	CNY/t	[REDACTED]
Unit price of Feedstock 2 (branches)	CNY/t	[REDACTED]

PP is requested to provide supportive evidence against the consideration of these figures.

4. The machinery equipment purchase contract is not provided to VVB to cross verify the input cost of [REDACTED], considered in the investment analysis. PP is requested to provide the same.

5. What are the existing laws, regulations, or other binding obligations regarding the organic waste management in the host country China? PP shall demonstrate that project activity does not bound to any compliance regulations by providing the relevance with major laws pertaining to waste management.

<b>Project participant response</b>	<b>Date : 11/02/2026</b>
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1. The IRR benchmark values from *Notice on Adjusting the Financial Benchmark Rate of Return for Construction Projects in Some Industries* (NDRC Investment [2013] No. 586) remain applicable today as no official update on this document has been issued since 2013, and it continues to be referenced in recent financial evaluations.

2. The internal biochar cost is reflected by the price difference between regular fertilizer and biochar-contained fertilizer.

For ex ante assessment, the *Feasibility Study Report* states: "This biochar is added to 35,000 tons of different products in varying proportions, with an average biochar content of 15% (dry basis). It is estimated to bring a premium of approximately [REDACTED] to the products. Therefore, the intrinsic value of the biochar can be considered to be approximately [REDACTED], taking the larger value of [REDACTED] dry basis biochar for calculation."

For ex post check, a price comparison is conducted between biochar-based fertilizer with a comparable regular organic fertilizer product that was also manufactured at SEEK's facility in Shanghai.

- The regular organic fertilizer supplied to Pujiang: [REDACTED]
- The biochar-based fertilizer supplied to Dongtai: [REDACTED]

The resulting price difference is [REDACTED]. With a biochar content of 18%, the intrinsic value of biochar derived from this comparison is calculated at [REDACTED], which is substantially lower than the value adopted for the ex ante calculation.

3. All these values are from the *Feasibility Study Report* for ex ante assessment.

For ex post check, relevant contracts related to tree branches and rice straws are provided to VVB, with the corresponding unit prices specified therein.

Please note that the cost of rice straw consists of two components: payments made to villages and payments made to the service provider responsible for collecting, baling, and transporting the straw. In the contracts, prices are quoted in CNY per Mu, with a combined cost of [REDACTED]. The contracts with villages include estimates of tonnage and acreage, indicating that each Mu is expected to yield 0.6 tonnes of rice straw. Based on this, the price quoted in CNY per Mu converts to [REDACTED].

Regarding the amount of feedstock, during the 1<sup>st</sup> monitoring period only tree branches were used, and the actual quantity was significantly lower than the design-phase estimate. In fact, the facility was running at less than 10% of its designed capacity.

4. The *Equipment purchase contract* and its English translation are now provided to VVB. The price of the carbonization production line can be found in the contract.

5. The following laws and regulations related to the management of organic waste management in China have been identified:

- [Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste](#)

- [Law of the People's Republic of China on Animal Husbandry](#)

- [Measures for the Administration of Straw Burning Prohibition and Comprehensive Utilization](#)

The provisions encourage proper management and resource utilization of organic/agricultural waste but do not impose mandatory requirements to convert such waste into biochar or any specific carbon sequestration technology.

#### Documentation provided by project participant

In the folder CL ID 03:

- Purchase contract of tree branches
- Purchase contracts of rice straws with villages (three examples)
- Service contract for rice straw collection
- Organic fertilizer contract [to Pujiang]
- Equipment purchase contract

#### VVB assessment

Date: 16/02/2026

1. The "Notice on Adjusting the Benchmark Rate of Return for Construction Projects in Certain Industries (NRDC Investment [2013] No. 586)" provides the guidelines for benchmark selection for construction projects. There are no updates to these guidelines on NRDC portal ([https://www.ndrc.gov.cn/xgk/zcfb/tz/201907/t20190729\\_964563.html](https://www.ndrc.gov.cn/xgk/zcfb/tz/201907/t20190729_964563.html)), implying that the regulations are still applicable to the financial analysis of construction projects. Chinese regional authorities applies same guidelines by NRDC for selection of benchmark in planning of new construction projects (<https://www.pudong.gov.cn/zwgk/006024008/2024/286/332941.html>). Other case studies referring to NRDC guidelines include *IPO/disclosure documents for Chengdu-Pengzhou Highway* ([https://static.sse.com.cn/stock/disclosure/announcement/c/202312/001699\\_20231226\\_440V.pdf](https://static.sse.com.cn/stock/disclosure/announcement/c/202312/001699_20231226_440V.pdf)), *Yunnan Phosphate Group Co., Ltd. - Asset Evaluation Report* ([https://file.finance.sina.com.cn/211.154.219.97%3A9494/MRGG/CNSESH\\_STOCK/2019/2019-7/2019-07-19/5499633.PDF](https://file.finance.sina.com.cn/211.154.219.97%3A9494/MRGG/CNSESH_STOCK/2019/2019-7/2019-07-19/5499633.PDF)). The selection of benchmark in regional context is therefore, deemed appropriate by assessment team. Closed.

2. The biochar cost applied in the financial analysis is derived from the feasibility study report. A conservative value of [REDACTED] was selected, representing the upper end of the observed market price range ([REDACTED]). Furthermore, ex-post monitoring data indicates that the actual sale price of biochar is lower than the price assumed in the financial analysis. This demonstrates that the analysis conservatively assumed a higher selling price, thereby not understating project revenues when comparing total project returns against the applicable industry benchmark. The assessment team considers the approach adopted by the PP to be appropriate. Closed.

3. The estimated input biomass feedstock quantities used in the financial analysis are derived from the feasibility study report prepared for the carbonization workshop. To substantiate these estimates, the PP has provided executed contractual agreements with biomass feedstock suppliers for cross-verification. The financial model reflects the projected figures from the feasibility study, which was developed prior to the execution of the supply contracts. The contractual agreements contain ex-post quantities that show minor deviations from the initial estimates. However, the feasibility study estimates are at the higher end of the observed range, thereby ensuring conservativeness and avoiding any underestimation of input quantities. The approach adopted by PP is deemed appropriate by assessment team. Closed.

4. PP has provided equipment purchase contract to substantiate the cost of machinery and equipment in the carbonization workshop. The value in the contract is [REDACTED], while in the financial model the value is rounded to [REDACTED]. The deviation is immaterial (~0.0066% difference) and does not impact the outcome of the financial analysis. Therefore, it is considered acceptable.

5. PP has provided the laws pertaining to organic waste management and it is concluded that the project activity is not mandated by any laws or regulations in the host country. Closed.

<b>CL ID</b>	04	<b>Section no.</b>		<b>Date :</b> 13/01/2026
<b>Description of CL</b>				
The calibration certificates for weighing scales are dated 08/09/2025 and 07/11/2025, which do not cover the whole monitoring period from 18/05/2025 to 31/08/2025. PP shall provide the calibration certificates of all the monitoring equipment covering the whole monitoring period.				
<b>Project participant response</b>				<b>Date :</b> 11/02/2026
Refer to the response to CAR ID 03.				
<b>Documentation provided by project participant</b>				
/ (Refer to the documentation for CAR ID 03)				
<b>VVB assessment</b>				<b>Date:</b> 16/02/2026
The calibration certificates covering the whole monitoring period were not available for the verification. PP has now applied discount factor to the data recorded through weighing scales. The applied discount factor corresponds to the maximum permissible error applicable to the weigh scale and the weight range measured. A detailed calculation sheet has been provided with the monitored and adjusted values, which are further incorporated into LCA model. The calculation approach is deemed appropriate by assessment team. Closed.				

<b>CL ID</b>	05	<b>Section no.</b>		<b>Date :</b> 08/09/2025
<b>Description of CL</b>				
<b>Reference:</b>				
Environmental Evaluation Report				
<b>Observations:</b>				
1. It has been mentioned under section 1 of the Environmental Evaluation Report, that the particle matters, SO2 and NOX emissions are estimated to be 0.4662 t/a, 0.4156 t/a and 0.944 t/a, respectively. However, the source of these estimations is not provided. Further, it has been mentioned that the emissions of particles, SO2 and NOX are regulated by the regional standard of Shanghai DB 31/933–2015 (Integrate emission standards of air pollutants).				
<b>Action Required:</b>				

PP shall provide the data source from where the particle matters, SO<sub>2</sub> and NO<sub>x</sub> emissions are sourced and PP shall also clarify how the emissions comply with prescribed regional regulation limits.

**Project participant response** **Date : 11/02/2026**

1. The data source of these estimations is the EIA Report. The values expressed in t/a can be converted into kg/h based on the annual operating hours, which typically range from 6000 to 8000 hours. Assuming 6000 hours of operation per year, the emission rates of particle matters, SO<sub>2</sub> and NO<sub>x</sub> are 0.078 kg/h, 0.069 kg/h and 0.157 kg/h, respectively.  
The limit values for particles, SO<sub>2</sub> and NO<sub>x</sub> in the regional standard of Shanghai DB 31/933–2015 are 1.5 kg/h, 1.6 kg/h and 0.47 kg/h, respectively.

**Documentation provided by project participant**

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**WB assessment** **Date: 17/02/2026**

PP has provided the EIA report drafted by Ministry of Ecology and Environment of the People’s Republic of China from which the values for emissions to air are sourced. Further, PP has demonstrated the compliance against regional standard DB31/933-2015 Integrated emission standards of air pollutants-Shanghai (<https://www.shanghai.gov.cn/cmsres/68/6896f87a882a492bb69fe0debc6af441/f4f41e9acaf955208c31465974bea640.pdf>). The clarification provided by PP is deemed appropriate by assessment team. Closed.

<b>CL ID</b>	06	<b>Section no.</b>	-	<b>Date : 08/09/2025</b>
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**Description of CL**

1. The technical specifications of pyrolysis equipment and associated machinery were not available during the onsite audit of the facility stating that the design of the equipment is highly customized and not the catalogued one. Therefore, the claims pertaining to different operational characteristics of the pyrolysis and associated equipment could not be verified. PP shall provide supportive documentation as means of verification against the operational characteristics of the pyrolysis equipment.
2. The installation date of the pyrolysis equipment and commissioning date of the facility, which marks a major milestone with the production of first batch of biochar, is not clearly demonstrated with the evidence shared during the onsite audit. PP shall provide a timeline listing major milestones pertaining to facility operations and project development.
3. It has been told that the safe disposal of hazardous waste is ensured through segregation into dedicated bins and disposed of through third party waste processors. However, the contractual agreements with the waste processing facilities or receipts confirming the disposal of waste through these entities were not provided during the onsite audit. PP shall provide supportive evidence as means of verification against the safe disposal of waste generated within the facility.

**Project participant response** **Date : 11/02/2026**

1. The document pertaining to technical specifications of pyrolysis equipment has now been provided to the VVB.
2. The completion date of the pyrolysis equipment installation is supported by *Equipment Handover and Acceptance Form*.  
The commissioning date of the facility is supported by *Pollutant Discharge Permit*, which marks the date from which formal operation is legally authorized.  
The supporting documents have now been provided to the VVB.
3. PP has signed a hazardous waste disposal agreement with a qualified company. This agreement has now been provided to the VVB.

Documentation provided by project participant	
<p>In the folder CL ID 06:</p> <ul style="list-style-type: none"> <li>- Technical Specifications of SEEK Biochar Production</li> <li>- Equipment Handover and Acceptance Form</li> <li>- Pollutant Discharge Permit</li> <li>- Pollutant Discharge Permit shown on official website</li> <li>- Industrial Hazardous Waste Treatment Service Agreement</li> </ul>	
VVB assessment	Date: 17/02/2026
<p>1. PP has provided the technical specifications document of the pyrolysis equipment clearly depicting the different technical and operational characteristics of the same. Closed.</p> <p>2. PP has provided the equipment handover and acceptance form to validate the installation date of the pyrolysis equipment which is 26/10/2024. The commissioning date of equipment and facility operations is substantiated with the Pollutant discharge permit marking the date to initiate the facility operations with safe discharge. Closed.</p> <p>3. PP has provided contractual agreements with waste disposal agencies to ensure the safe disposal of hazardous waste generated within the facility. Closed.</p>	

**Table 2. CAR from current assessment**

CAR ID	01	Section no.	Date : 20/01/2026
<b>Description of CL</b>			
<p><b>Reference:</b>            CORC Report Summary            Summary of biochar production data            Biochar-based fertilizer sales invoice 01/02            Summary of biochar-based fertilizer production            Biochar-based fertilizer stock-out records</p> <p><b>Observation:</b>            1. As per the Summary of biochar production data sheet/Tab-Summary/Cell-D7, the amount of wet biochar produced in the current monitoring period is 174.35 MT, while the amount of biochar used in the production of fertilizer is 215.26 MT wet basis. The quantity of biochar produced and used for the production of fertilizer is inconsistent the stock out records and the production records.</p> <p>2. The total quantity of fertilizer sold is 1174.52 as per the sales invoices for the biochar based fertilizer dated 18/11/2025, while as per the Biochar stock out records sheet/Tab-Summary/Cells-C3&amp;C4, the product output is 1195.97. This implies that the 21.45 MT of fertilizer was not sold and remained stocked.</p> <p><b>Action Required:</b>            1. PP shall clearly demonstrate the quantity of biochar produced and used within the current monitoring period.</p> <p>2. PP shall clarify the inconsistency and quantification approach.</p>			
<b>Project participant response</b>			<b>Date : 11/02/2026</b>
<p>Both observed gaps in weights are primarily attributable to changes in moisture content during storage.</p> <p>1. The weight of 174.35 metric tonnes represented freshly produced biochar with approximately 10% moisture content, as shown in the moisture measurement records. To mitigate risks of spontaneous combustion, dust generation, or fire/explosion during storage, water was intentionally added prior to blending into fertilizer, leading to an increased weight.</p>			

2. The gap of 21.45 metric tonnes reflects natural water evaporation during storage and transport, rather than unsold stock. No biochar-based fertilizer from June and July operations remains unsold.

**Documentation provided by project participant**

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**VB assessment**

**Date: 17/02/2026**

1. The difference in the quantities of biochar produced and used for the biofertilizer production occurred due to intentional addition of moisture to the biochar in stock as a safety measure. The same has been confirmed through interviews with the facility personnel during the onsite audit. The quantity of biochar over which CORCs are claimed is included as dry mass basis and does not include moisture mass. The clarification provided by PP and the data monitoring and recording procedure is deemed appropriate by assessment team. Closed.

2. PP has clarified the difference in quantities of biofertilizer produced and sold is attributed to moisture content only, which does not impact the quantity biochar sold and the CORCs claimed. The same has been confirmed through interviews with the facility personnel during the onsite audit. The clarification provided by PP is deemed appropriate by assessment team. Closed.

<b>CAR ID</b>	02	<b>Section no.</b>		<b>Date :</b> 20/01/2026
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**Description of CAR**

**Reference:**

Tree branches stock-in records.xlsx  
 Summary of biochar production data.xlsx  
 Puro LCA Model

**Observations & Action Required:**

1. The net weight of tree branches transported to the facility is 439 MT within current monitoring period as per Tree branches stock-in records.xlsx, while total mass of feedstock considered in the LCA model and Summary of biochar production data.xlsx is 445 MT. PP shall clarify the inconsistency over total quantity of feedstock used within current monitoring period.

2. The number of ton bags considered in the LCA model is 204 units, and the source of data is mentioned as purchase agreement of ton bags. However, the quantity mentioned in the purchase agreement is 206 units. PP shall clarify the inconsistency over values for the parameter.  
 Further, as per Biochar production data sheet/Tab- Biochar/Rows- D&F, it was observed that the number of ton bags used is 434. PP shall clearly demonstrate how the units of ton bags used in the current monitoring period are accounted.

3. The LCA report mentions the material used in construction under section 3.3.2.3 where the quantity of cement and reinforcing steel is reported as 1 tonne and 21 tonnes respectively. While, in the LCA sheet/Tab-LCI/Cells-E83 & E84, the quantity of above-mentioned commodities is mentioned as 0.5 tonnes and 240 tonnes. PP shall clarify the inconsistency and the rationale behind estimates included in the LCA calculation.

**Project participant response**

**Date : 11/02/2026**

1. We acknowledge that the recorded biomass feedstock quantity of 445 metric tonnes for the 1<sup>st</sup> monitoring period was subject to measurement inaccuracy. During this period, the loader was not equipped with an integrated electronic scale. Instead, the operator measured the first 5 scoops or 3 scoops (both loader's curb weight and loader plus feedstock weight) on the truck scale during each shift to calculate the average feedstock weight per scoop, and then recorded the number of loader scoops during that shift, so that the total feedstock weight of the shift was calculated by multiplying the average per scoop by the number of scoops. This process is fully documented in the "Feedstock weighing records" (and its English translation is provided in "Summary of biochar production data").

Having examined both the "Feedstock weighing records" and "Tree branches stock-in records", we confirm that they are complete and without gaps. A comparison of these two records indicates that the "Feedstock weighing records" overestimated the actual feedstock quantity. Consequently, using 445 tonnes in the LCA represents a conservative approach, leading to a slight overestimate of supply chain emissions.

To address the inaccuracy, an electronic weighing scale has been installed on the loader, enabling direct measurement and recording of each scoop from the October operation onward (to be included in the upcoming 2<sup>nd</sup> monitoring period).

2. The previously provided purchase agreement mentioned a quantity of 205 ton-bags, and another purchase agreement has now been provided for reference.

We would like to clarify that all ton-bags are reused within the facility. Specifically, 194 ton-bags were used for biochar from Batch 1 and Batch 2, and these ton-bags were emptied for fertilizer mixing before the start of Batch 3 production. For Batch 3 production, 248 tons-bags were used, and then emptied for fertilizer mixing. Therefore, the total number of ton-bags used for biochar production was 248.

The previously stated figure of 204 in the LCA is deemed incorrect and has been revised to 248 (see tab “LCI”). This revision results in a slight increase in LCA emissions. The associated LCA Report and Project Description are also revised accordingly.

3. The “*Summary of embodied materials and electricity of capital goods*” has been updated to provide more detailed explanations on how the embodied materials and electricity were derived.

We would like to clarify that embodied materials and electricity pertaining to the construction of the building structure and that of the production equipment are separately considered.

The stated quantity of 1 tonne of cement was in fact a rounded value derived from 0.594 tonnes, i.e., 594 kg. In the LCA calculation, the same amount of cement is applied.

The stated 21 tonnes of reinforcing steel refers exclusively to the reinforcing steel used for the building structure. The reinforcing steel is also incorporated in the production equipment, and the value of 241245 kg represents the combined embodied reinforcing steel for both the building structure and production equipment of the Carbonization Workshop.

**Documentation provided by project participant**

*In the folder CAR ID 02:*

- *Purchase agreement of ton-bags No.2*

*Additionally, the following documents are also provided and placed in other folders:*

- *Summary of embodied materials and electricity of capital goods, provided as part of the documentation for CL ID 02 (see above)*
- *Puro\_LCA Model\_Biochar\_SEEK 469599, placed in the folder “LCA, CORC & associated documents”*
- *Puro\_LCA Report SEEK 469599, placed in the folder “LCA, CORC & associated documents”*
- *Puro Project Description SEEK 469599, placed in the folder “LCA, CORC & associated documents”*

**VVB assessment**

**Date: 17/02/2026**

1. PP has clarified that the operating personnel during initial operations measured the weight of curb along with the feedstock due to absence of integrated weighing scale on the loader, averaged the same and multiplied it with the number of scoops per shift. The same was confirmed through interviews with site personnel during the onsite audit. The collected biomass feedstock quantity was 439 MT, while the monitored feedstock quantity was 445 MT and later is applied in the LCA calculations. As biomass feedstock contributes to project emissions, the use of higher value results in a conservative estimation of emissions. The 1.37% deviation is considered immaterial and does not affect the overall conclusions of the assessment. The clarification is deemed appropriate by assessment team. Closed.

2. PP has provided an additional purchase contract for the ton bags with supply quantity of 205 bags. The total quantity of ton bags within the facility is 410 units. PP has clarified and assessment team confirmed through onsite interviews that the ton bags were reused after each batch of biochar is subjected to biofertilizer production. The total quantity of ton bags used throughout the monitoring period is 248 bags confirmed through onsite inventory. Closed.

3. PP has clarified that the quantity of reinforcing steel used in the LCA model amounts to 241 tons and is sourced from purchase contract and a detailed calculation sheet is provided where the quantities of different materials concerning the carbonization workshop is calculated. The figures included in the LCA

model are verified with the detailed calculation sheet and purchase agreements and deemed appropriate by assessment team. Closed.

<b>CAR ID</b>	03	<b>Section No.</b>		<b>Date :</b> 09/02/2026
<b>Description of CAR</b>				
<p>The calibration certificates for the weighing scales used to monitor input biomass, biochar output stock, and the moisture were not available for verification for the entire monitoring period. CLID 04 was previously raised during the desk review in this regard. In the absence of evidence confirming valid calibration, the monitored data shall be conservatively adjusted through the application of an appropriate discount factor.</p> <p>PP shall either provide valid calibration certificates covering the full monitoring period or apply a justified discount factor to the monitored data obtained from the respective weighing scales installed at the facility.</p>				
<b>Project participant response</b>				<b>Date :</b> 11/02/2026
<p>The calibration certificates covering the first monitoring period have not been found. Consequently, conservative adjustments have been applied to the input biomass mass, biochar output mass, and moisture measurements.</p> <p>The procedure for these conservative adjustments is explained in the updated “Description of measuring devices SEEK 469599”. Furthermore, the Excel spreadsheet “Summary of biochar production data” now included three new worksheets, “Feedstock_cons.”, “Biochar_cons.” and “Moisture_cons.”. These sheets detail the error propagation calculations and the adoption of conservative values that result in lower carbon removal credits. It should be noted that the adjustments result in very minor changes, which become visible only when several decimal places are displayed.</p> <p>The conservative adjustments impact the feedstock mass applied in the LCA calculation, as well as the biochar mass and moisture content used in the CORC calculation. Accordingly, “Puro_LCA Model_Biochar_SEEK 469599” and “Puro_CORC Report Summary - Biochar_SEEK 469599” have been revised to reflect these adjustments.</p>				
<b>Documentation provided by project participant</b>				
<p><i>In the folder CAR ID 03:</i></p> <ul style="list-style-type: none"> <li>- Sub-folder “Measuring devices”, which contains updated “Description of measuring devices SEEK 469599” along with other documents</li> <li>- Summary of biochar production data, updated from the previous submission</li> </ul> <p><i>Additionally, the following documents are updated and placed in the folder “LCA, CORC &amp; associated documents”:</i></p> <ul style="list-style-type: none"> <li>- Puro_LCA Model_Biochar_SEEK 469599</li> <li>- Puro_LCA Report SEEK 469599</li> <li>- Puro_CORC Report Summary - Biochar_SEEK 469599</li> <li>- Puro Project Description SEEK 469599</li> </ul>				
<b>VB assessment</b>				<b>Date:</b> 17/02/2026
<p>The calibration certificates covering the whole monitoring period were not available for the verification. PP has now applied discount factor to the data recorded through weighing scales. The applied discount factor corresponds to the maximum permissible error applicable to the weigh scale and the weight range measured. A detailed calculation sheet has been provided with the monitored and adjusted values, which are further incorporated into LCA model. The calculation approach is deemed appropriate by assessment team. Closed.</p>				

**Table 3. FAR from current assessment**

<b>FAR ID</b>	NA	<b>Section No.</b>		<b>Date :</b> DD/MM/YYYY
<b>Description of FAR</b>				
NA				
<b>Project participant response</b>				<b>Date :</b> DD/MM/YYYY
<b>Documentation provided by project participant</b>				

VWB assessment	Date: DD/MM/YYYY
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e.g., there is no FAR from this assessment.

## APPENDIX 3: AUDIT TEAM EXPERIENCE

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	YES		
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	20/05/2025
Approved by	Deepika Mahala (Technical Manager)	Date	20/05/2025

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	YES		
TA Expert (X.X)	YES (TA 1.1, TA 1.2 & TA 13.1)		
Reviewed by	Shifali Guleria (Quality Manager)	Date	27/02/2026

<b>Approved by</b>	Deepika Mahala (Technical Manager)	<b>Date</b>	27/02/2026
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## APPENDIX 4: REFERENCE DOCUMENTATION

S. No	Title	Version
1.	Puro Standard General Rules	Version 4.2
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	Version 3.0 Edition 2022
7.	Project Description Document	1.0
8.	Purchase Contract of Pyrolysis Equipment	Dated March 2025
9.	Business license of SEEK Biotechnology (Shanghai) Co. Ltd.	Dated 22/08/2024
10.	Baseline and Additionality Assessment	Version 1.9
11.	a. SEEK Jinshan EIA Report b. SEEK Jinshan EIA Report Approval	Dated July 2024  Dated 27/08/2024
12.	Puro Stakeholder Engagement Report	Dated 02/12/2025
13.	Puro Environmental and Social Safeguards Questionnaire SEEK	Dated 01/09/2025
14.	Puro Environmental Evaluation Report SEEK	Dated 14/11/2025

15.	Contracts with SEEK's Biomass Suppliers - Rice Straw - Autumn Straw Purchase Contract - Urban green cuttings - Landscaping Branch Purchase Contract						-
16.	Stock-in & out record of SEEK Jinshan Plant						-
17.	Pollutant discharge permit						Dated 10/11/2024
18.	Industrial hazardous waste treatment service agreement SEEK						Dated 16/08/2025
19.	Stakeholder Meeting records						-
20.	Stakeholder Engagement Invitation Letters						Period 11/04/2024 - 28/10/2024
21.	SEEK's Employee Manual						-
22.	SEEK's Labor Contract						-
23.	Protocol for safe handling of biochar SEEK 469599						-
24.	Water Consumption records - invoices						For the monitoring period: May 2025 - August 2025
25.	Pyrolysis equipment handover and acceptance form						Dated May 2025
26.	Life Cycle Assessment Report of SEEK Biochar Production						Dated 15 <sup>th</sup> September 2025
27.	On-site audit records						Dated 04 <sup>th</sup> February 2026
28.	a. LCA Model on SEEK Biochar Production and Use for CORC Calculation b. SEEK Biochar CORC Report Summary						-
29.	Internal Calibration Procedures & Requirements						-
	S. No.	Device	Model	Use	Calibration Requirement	Calibration Date	
	1.	Electronic scale (Carbonization Workshop)	YKVT-K12	Weighing of Biochar	JJG 539-2016 Once a year	04/09/2025	

	2.	Electronic scale (laboratory)	CN-LQC2000 2	Moisture analysis	JJG 1036-2022	05/11/2025	
	3.	Platform scale	CPI-D10	Weighing of Biomass	JJG 539-2016	04/09/2025	
	4.	Electricity meters (Main meter)	DSZ83	Electricity consumption	Under jurisdiction of regional electricity supplier	NA	
	5.	Electricity meters (Sub meter)	Acrel AMC	Electricity consumption	Under jurisdiction of regional electricity supplier	NA	
30.	Biofertilizer records <ul style="list-style-type: none"> <li>- Biochar based fertilizer production records</li> <li>- Biochar based fertilizer stock out records</li> <li>- Biofertilizer contract</li> <li>- Biochar based fertilizer sales invoices</li> </ul>						-
31.	Process Diagram of Production process						-
32.	Geotagged & Timestamped pictures and Videos of biochar-based fertilizer in Soil application						-
33.	End-user statements demonstrating the application and benefits of Biochar based fertilizer to the soil						Dated 06 <sup>th</sup> July 2025
34.	Laboratory Analysis Reports <ul style="list-style-type: none"> <li>- Biochar Batch 1</li> <li>- Biochar Batch 2</li> <li>- Biochar Batch 3</li> <li>- Biochar based organic fertilizer</li> </ul>						-
35.	Biochar Production records						-
36.	Puro Earth Baseline and Additionality Questionnaire						-
37.	UNFCCC CDM Tool 27 Investment Analysis						-
38.	Meters and Manufacture						-
	S.No	Name	Purpose	Serial Number	Manufacturer	Accuracy class	Error factor
	1.	Platform scale (CPI-D10)	Weighing of biomass	866156053062801	Zhongli (Ningbo) Weighing equipment Co., Ltd.	III	± 10 kg for loads from 0 to 10 tonnes

							± 20 kg for loads from 10 to 40 tonnes
							± 30 kg for loads from 40 to 100 tonnes
2.	Electronic scale (Carbonization Workshop) (YKVT-K12)	Weighing of biochar	202401532	Kunshan Youkeweite Electronic Technology Co., Ltd.	III	± 0.25 kg for loads from 0 to 250 kg ± 0.50 kg loads from 250 to 1000 kg ± 0.75 kg for loads from 1000 to 3000 kg	
3.	Electronic scale (laboratory) (CN-LQC2000 2)	Moisture analysis	22079693	Kunshan Youkeweite Electronic Technology Co., Ltd.	II	± 0.05 g for loads from 0 to 500 g ±0.1 g for loads from 500 to 2000 g	
4.	Electricity Meter (Main) (DSZ83)	Electricity Consumption	2021E936-37	Techen	C	±0.5%	

	5.	Electricity Meter (Submeter) (Acrel AMC)	Electricity Consumption	-	Acrel	0.5S	±0.5%	
39.	LCA Evidence <ul style="list-style-type: none"> <li>- Energy uses summary</li> <li>- Transport-distance summary</li> <li>- Biochar weighing records</li> <li>- Machine operation records</li> <li>- Feedstock weighing records</li> <li>- Purchase agreements of ton bags</li> <li>- Moisture content records</li> <li>- Electricity bills</li> <li>- Proposal for Machinery</li> <li>- Other Infrastructure specifications</li> <li>- Description of the procedures for obtaining soil temperatures</li> </ul>							-
40.	Technical specifications of SEEK Biochar's production unit							-
41.	Calibration certificates of weigh scales <ul style="list-style-type: none"> <li>- Platform scale (CPI-D10)</li> <li>- Electronic scale (Carbonization Workshop) (YKVT-K12)</li> <li>- Electronic scale (laboratory) (CN-LQC20002)</li> </ul>							Dated -04/09/2025 -04/09/2025 -05/11/2025
42.	Layout plan of the SEEK premises and the carbonization workshop							-
43.	Service Contract between SEEK Bio-technology (Shanghai) Co., Ltd. and Shanghai Xinjun Construction Development Co., Ltd.							Dated 24 <sup>th</sup> August 2023
44.	Independent research regarding Baseline scenario & Additionality <ul style="list-style-type: none"> <li>- <a href="https://documents1.worldbank.org/curated/en/099535012302212157/pdf/P17151809b96ca0e095a50216f8d6d7868.pdf">https://documents1.worldbank.org/curated/en/099535012302212157/pdf/P17151809b96ca0e095a50216f8d6d7868.pdf</a></li> <li>- <a href="https://link.springer.com/article/10.1007/s10311-023-01612-3">https://link.springer.com/article/10.1007/s10311-023-01612-3</a></li> <li>- <a href="https://www.researchgate.net/publication/352432948_Research_Status_of_Generation_and_Management_of_Garden_Waste_in_China_A_case_of_Shanghai">https://www.researchgate.net/publication/352432948_Research_Status_of_Generation_and_Management_of_Garden_Waste_in_China_A_case_of_Shanghai</a></li> <li>- <a href="https://link.springer.com/article/10.1007/s11356-023-25367-0">https://link.springer.com/article/10.1007/s11356-023-25367-0</a></li> </ul>							
45.	Description of the procedures for obtaining soil temperatures.pdf							-
46.	Safe operation protocol of production equipment SEEK 469599							-
47.	Internal Calibration Measures document – Description of measuring devices							-
48.	Amap navigation showing transport distance from SEEK biochar facility to soil application site							-
49.	Statement of understanding of physical-product decoupling							Dated 17 <sup>th</sup> November 2025

50.	SEEK's Biochar production Equipment Questionnaire	-
51.	<ul style="list-style-type: none"> <li>- Electricity meter reading records and calculation.xlsx</li> <li>- Electricity meter reading records_2025MAY-2025DEC.pdf</li> </ul>	-
52.	SEEK Biochar 's branding claims – Photographs of the final marketed biofertilizer product	-
53.	SEEK Biochar's Standard Operating Procedures (SOP) <ul style="list-style-type: none"> <li>a. Protocol for biochar sampling and testing</li> <li>b. Protocol for soil temperature selection</li> </ul>	-
54.	Puro-earth Biochar Testing Methods	-
55.	Staff list of SEEK Biochar Factory	-
56.	Technical specifications documents <ul style="list-style-type: none"> <li>- Weigh scales</li> <li>- Electricity meters</li> </ul>	-
57.	Tree branches stock in records	-
58.	Declaration from construction firm – quantity of different raw materials used in the construction	-
59.	Delivery invoices of biofertilizer	-
60.	Ecoinvent impact analysis sheet	-
61.	SEEK- Biofertilizer environmental quality analysis_supplementary information	-
62.	<ul style="list-style-type: none"> <li>a. Financial spreadsheet of SEEK Biochar Facility</li> <li>b. Evidences for input parameters in Financial analysis <ul style="list-style-type: none"> <li>- Construction contract</li> <li>- Feasibility study report</li> <li>- Service contract for rice straw collection</li> <li>- Purchase contract of rice straw with villages</li> <li>- Purchase contract of tree branches</li> <li>- Organic fertilizer contract</li> <li>- Equipment purchase contract</li> </ul> </li> </ul>	-
63.	Energy and Mass Balance sheet of the Biochar facility	-
64.	Positive list of biomass feedstock <a href="https://www.european-biochar.org/media/doc/2/positivlist_en_2025_v02.pdf">https://www.european-biochar.org/media/doc/2/positivlist_en_2025_v02.pdf</a>	-
65.	Research article and data source for determining soil temperature <a href="https://zenodo.org/record/4558732#.Ydv0Hf7MJPY">https://zenodo.org/record/4558732#.Ydv0Hf7MJPY</a>	-

66.	Sampling and Production logs	-
67.	Photographical records of Biochar sampling – Sampled Biochar	-
68.	Notice on Adjusting the Benchmark Rate of Return for Construction Projects in Certain Industries (NDRC Investment [2013] No. 586	
69.	Biochar Methodology edition 2025, v.2	November, 2025
70.	Contractual agreement between Climate Bridge (Shanghai) Ltd. and SEEK Bio-Technology (Shanghai) Co. Ltd.	18 <sup>th</sup> January, 2024