



Final Audit Report

Audited Body	
Puro.earth Project Proponent	L.F Jeffries Nominees Pty Ltd t/a Jeffries Group
Name of Contact for Puro.earth Project Proponent	Rengarajan Ramasamy
Production Facility Operator	L.F Jeffries Nominees Pty Ltd t/a Jeffries Group
Name of Contact for Production Facility Operator	Rengarajan Ramasamy
Production Facility name	Jeffries Group
Production Facility ID	114352
Production Facility Location	515 Brooks Rd, Buckland Park SA 5120, Australia

Audit Description	
Type of Audit	Production Facility Audit and Output Audit
Number of CORCs under Audit	284
Tonnes of dry biochar under Audit	170.33
CORC conversion factor under Audit	1.671 tCO ₂ e per tonne dry biochar
Reporting Period Covered by Audit	1 February 2023 to 31 January 2024
Objective of Audit Engagement	Provide assurance opinion against requirements of Puro.earth Rules v3.1
Date of Auditor Engagement	22 July 2024
Date of Audit Report Submission	28 October 2024

Audit Outcomes	
Production Facility Eligibility	Eligible
Number of eligible CORCs	297
Tonnes of eligible dry biochar	170.33
CORC conversion factor	1.749 tCO₂e per tonne dry biochar
Calculation Method	Biochar Methodology

Auditing Body	
Auditor	EnergyLink Services Pty Ltd
Lead Auditor	Rodrigo Pardo Patron
Additional Audit Personnel	Thais Monteiro Voll
Peer Reviewer	Katherine Simmons

This document details the nature and scope of the services provided by a member of EnergyLink Services in respect of the eligibility of the CO₂ Removal Supplier Production Facility under the requirements of Biochar Methodology v3.0 (Edition 2022) and the Puro Standard General Rules v3.1.

This document is issued to Puro.earth detailing audit procedures conducted and the auditor's opinion in relation to the eligibility of the Production Facility. It should not be used for any other purpose.

Because of the inherent limitations in any internal control structure, it is possible that fraud, error, or non-compliance with laws and rules may occur and not be detected. Further, the audit was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above as the audit has not been performed continuously throughout the period and the procedures performed on the relevant internal controls were on a test basis. Any projection of the evaluation of control procedures to future periods is subject to the risk that the procedures may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

The audit opinion expressed in this report has been formed on the above basis.

Copies of relevant documentation are available on the Puro.earth website: puro.earth

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20241028 Jeffries Group – Facility and Output Final Audit Report vF.0	28 October 2024	vF.0	Rodrigo Pardo	Katherine Simmons

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Abbreviation	Description
'H'	Hydrogen
'O'	Oxygen
CCT	Continuous Carbonization Technology
CO ₂	Carbon Dioxide
CORC	CO ₂ Removal Certificate
C _{org}	Organic Carbon
GHG	Greenhouse Gas
LCA	Life Cycle Assessment
OC	Overcalculation
UC	Undercalculation
The Puro Rules	the Puro Standard General Rules v3.1
The New Puro Rules	the Puro Standard General Rules v4.0 (Edition 2024)
The Biochar Methodology	Edition 2022 v3

PART A: Auditor’s Report

To: Puro.earth

Dear Sir / Madam,

EnergyLink Services Pty Ltd (EnergyLink Services) were engaged to perform a reasonable assurance audit of L.F Jeffries Nominees Pty Ltd t/a Jeffries Group’s CO₂ Removal calculation for the reporting period covered by the audit, from 1 February 2023 to 31 January 2024, against the eligibility requirements of ‘the Puro Standard General Rules v3.1’ (hereafter referred to as “the Puro Rules”).

Details of Audited Body

Puro.earth Project Proponent	L.F Jeffries Nominees Pty Ltd t/a Jeffries Group
Production Facility Operator	L.F Jeffries Nominees Pty Ltd t/a Jeffries Group GSRN: 643002406801000176
Production Facility name	Jeffries Group
Production Facility ID	114352
Production Facility location	515 Brooks Rd, Buckland Park SA 5120, Australia

Responsibility of the Audited Body Management

The management of the audited body (that is L.F Jeffries Nominees Pty Ltd t/a Jeffries Group) is responsible for the application of the requirements of ‘Biochar Methodology of the Puro Rules Edition 2022 v3’ (hereafter referred to as “the Biochar Methodology”) in quantifying CO₂ Removal Certificates (CORCs) from the production of biochar, which is reflected in the proof provided to EnergyLink Services.

The management of the audited body is responsible for preparation and presentation of the evidence in accordance with Section 5 the Biochar Methodology. This responsibility includes the design, implementation, and maintenance of internal controls relevant to the preparation and presentation of proofs that are free from material misstatement, whether due to fraud or error.

Our independence and quality control

EnergyLink Services have complied with the relevant ethical requirements relating to assurance engagements, which include independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence, due care, confidentiality, and professional behaviour. These include all the requirements defined in the *Fortum – Supplier Code of Conduct*¹.

Furthermore, EnergyLink Services maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements, in accordance with *ISQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information*.

¹ Fortum (2020), Fortum – Supplier Code of Conduct, available at: www.fortum.com/about-us/contact-us/suppliers/code-of-conduct

Our responsibility

EnergyLink Services' responsibility is to express an opinion on the audited body's quantification of CORCs and compliance with the *Puro Rules* based on the procedures we have performed and the evidence we have obtained.

We have conducted a reasonable assurance engagement in accordance with the *Puro Rules* and relevant international standards, as listed below:

- International Standards on Assurance Engagements ISAE 3000 Assurance Engagements other than Audits or Reviews of Historical Financial Information.
- ISQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagement.

A reasonable assurance engagement in accordance with relevant international standards involves performing procedures to obtain evidence about the Production Facility process controls and quantification of CORCs in accordance with the *Puro Rules*. The nature, timing and extent of procedures selected depend on the assurance practitioner's judgement, including the assessment of the risks of material misstatement, whether due to fraud or error. In making those risk assessments, we considered internal controls relevant to the audited body's preparation of proofs. We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusion.

Summary of procedures undertaken

The procedures we conducted in our reasonable assurance engagement included:

- reviewing evidence provided by the audited body;
- assessing the audited body against eligibility criteria;
- conducting interviews and a (virtual) site visit to validate the evidence provided;
- analysing procedures that the audited body used to gather data;
- testing of calculations that the audited body performed; and
- identifying and testing assumptions supporting the calculations.

Use of our reasonable assurance engagement report

This audit report has been prepared for use by the audited body and Puro.earth for the sole purpose of reporting on the audited body's quantification of CORCs and compliance with the *Puro Rules*. Accordingly, EnergyLink Services expressly disclaim and do not accept any responsibility or liability to any party other than Puro.earth and the audited body for any consequences of reliance on this report for any purpose.

Inherent limitations

There are inherent limitations in performing assurance audits - for example, assurance engagements are based on selective testing of the information being examined - and because of this, it is possible that fraud, error, or non-compliance may occur and not be detected. An assurance engagement is not designed to detect all misstatements, as an assurance engagement is not performed continuously throughout the period that is the subject of the engagement, and the procedures performed are based on a test basis. The conclusion expressed in this report has been formed on the above basis.

Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating, and sampling or estimating such data.

Corrective Action Requests / Recommendations

During the audit process, the auditor issued six (6) corrective action requests, which were addressed during the audit. Further, the auditor issued four (4) recommendations to be implemented by the next audit.

Corrective Action Request 1: Electricity emissions factor

In the LCA, the auditor noted that Jeffries Group had used the Western Australia electricity emissions factor instead of the South Australian emissions factor. Consequently, Jeffries Group reviewed and updated the electricity emissions factor to align with the facility's location.

Corrective Action Request 2: Energy content factor for diesel

In the LCA, the auditor noted that Jeffries Group had used the energy content factor for diesel from a Swedish source instead of an Australian energy content factor. Consequently, Jeffries Group reviewed and updated the energy content factor for diesel to align with the facility's location.

Corrective Action Request 3: Record keeping of operational hours

To determine the diesel, electricity, and water consumption required for biochar production, Jeffries Group used an internal spreadsheet titled '*Biochar Plant Hours Logs_Elec_Diesel_Water_Calcs*'. This spreadsheet included manual records from the continuous carbonization technology (CCT) system, such as Start Time, Feed Start, Hearth Burner Off, Oxidiser Burner Off, and Plant Stop. Using the recorded operational hours and internal assumptions, Jeffries Group calculated the consumption of diesel, electricity, and water to estimate emissions for the biochar produced. The auditor noted that one record had a start time entered but lacked other time entries, such as the plant stop. As a result, Jeffries Group reviewed their records and added an estimated production time for that specific date and estimated the emissions associated with that date.

Corrective Action Request 4: Infrastructure, chemical and flue gas emissions

The auditor requested the calculations related to infrastructure, chemical, and flue gas emissions from Jeffries Group. In response, Jeffries Group reviewed its calculations and provided updated figures in the reviewed LCA.

Corrective Action Request 5: Moisture Content

Jeffries Group collected three types of samples for biochar production:

- I. Immediately after quenching, samples are collected and sent to a third-party laboratory;
- II. Similarly, immediately after quenching, samples are collected for in-house moisture measurements; and
- III. Additional in-house moisture measurements are collected once a new windrow of pure biochar is formed and weighed, just before blending with compost. This third sampling can occur several weeks or even months after quenching and as such, the moisture content may be considerably different to the immediately quenched biochar.

The auditor noted that the production calculations recorded in the internal spreadsheet titled '*Biochar Plant Hours Logs_Elec_Diesel_Water_Calcs*', the 'activity tonnage' is logged after each shift. This aligns with the timing of samples sent to the third-party laboratory and the samples taken for in-house moisture sampling. However, Jeffries Group used the third sampling to calculate total energy consumption, including diesel, electricity and water use. Upon request, Jeffries Group revised their moisture content estimates, changing from three internal moisture samples from the third type of samples to an average moisture content percentage based on 47 in-house measurements taken after quenching (i.e. the second type of samples) and recalculated the total energy consumption.

Corrective Action Request 6: $E_{\text{production}}$ and E_{use} Calculations

Jeffries Group confirmed that no pure biochar was sold during the reporting period, i.e. all biochar sold was blended with compost or other fertilizer ingredients in pellets. For blending, 20% biochar is mixed with 80% of Jeffries' Organic Compost and mixed in an open windrow.

According to section 4.5 of the Biochar Methodology, 'all greenhouse gas emissions from the transportation and handling of biochar must be accounted for until it is used in a mineral matrix (such as soil or concrete) from which it cannot be separated'. Following the blending process, the biochar cannot be separated from the compost, marking the end of the biochar's life cycle assessment. Consequently, Jeffries Group reviewed their LCA boundary, including emissions related to the blending of biochar with compost and excluding emissions associated with the transportation and spreading of the blended biochar in their LCA calculations.

Recommendation 1: Record keeping and quality assurance

Findings: Emissions Factor, Energy Content factor, Operational hours, Moisture Content, $E_{\text{production}}$ and E_{use} Calculations

Because of the findings described in Corrective Action Request 1, Corrective Action Request 2, Corrective Action Request 3, Corrective Action Request 4, Corrective Action Request 5 and Corrective Action Request 6, the auditor has issued the following recommendation.

Recommendation

The auditor recommends Jeffries Group augment its record keeping, quality assurance and LCA calculation procedures to ensure that:

- All data, assumptions, and formulae used for the calculation of emissions associated with the biochar life cycle are traceable, transparent, well-documented, complete, and consistent with the supporting evidence, and
- All relevant emissions sources are properly traceable, transparent, well-documented and consistent with the LCA emissions boundary.

This is expected to increase the auditability of the records and reduce the risk of errors.

Recommendation 2: Measurement Accuracy

Finding

To determine the diesel, electricity, and water consumption required for biochar production, Jeffries Group use an internal spreadsheet titled '*Biochar Plant Hours Logs_Elec_Diesel_Water_Calcs*'. This spreadsheet includes manual records from the CCT system, such as Start Time, Feed Start, Hearth Burner Off, Oxidiser Burner Off, and Plant Stop. Using the recorded operational hours and internal assumptions, Jeffries Group calculate the consumption of diesel, electricity, and water to estimate emissions for the biochar produced.

Recommendation

The auditor recommends that Jeffries Group implement appropriate metering and monitoring procedures to quantify the energy use per batch at the Production Facility, especially the electricity consumption and the emissions from the biochar production process.

Recommendation 3: Laboratory results

Finding

Jeffries Group provided a single laboratory report for the entire reporting period. As biochar production involves varying feedstocks, such as different ratios of green organic waste and wood waste, these variations might not be reflected in the sole laboratory result. Once Jeffries Group has a comprehensive understanding of biochar properties, Jeffries Group can determine the appropriate frequency for conducting laboratory tests.

Recommendation

The auditor recommends that Jeffries Group consistently commissions laboratory tests to gauge changes in results so that the CORC calculation accurately reflects the biochar production for the reporting period.

Recommendation 4: Evidence of No Double Counting

Finding

The auditor confirmed that, during the reporting period, Jeffries Group sold a soil improvement product containing biochar, rather than pure biochar. A review of their marketing materials and website confirmed that there were no references to carbon sequestration or claims of being “carbon positive”. Instead, the focus of their marketing material was on the benefits of the soil improvement product (i.e. a biochar-compost blend). However, to ensure completeness and transparency, Recommendation 4 is made to include a “no double-counting clause” in relevant documentation, providing explicit clarity regarding section 5.5.4 of the Biochar Methodology.

Recommendation

The auditor recommends that Jeffries Group enhance its internal sales procedure to ensure that a “no double counting clause” is included where relevant (e.g. offtake agreement, documentation of the sale or shipment of the product), as per section 5.5.4 in the Biochar Methodology.

Overall Conclusion

Positive Conclusion (Production Facility Audit)

Qualified Conclusion (Output Audit)

Production Facility Audit

In the lead auditor's opinion, the carbon removal activity performed in the audited CO₂ Removal Supplier's Production Facility met the eligibility requirements of the Puro Standard General Rules Version 3.1.

Production Output Audit

In the lead auditor's opinion, due to the matters discussed in *Basis for Qualified Conclusion* related to the CORCs claim, **13 additional CORCs from the 284 CORC claim** calculated for the reporting period 1 February 2023 to 31 January 2024 are not fairly presented, free of material misstatement and have not been calculated in accordance with the Puro Standard General Rules Version 3.1.

Whilst the net error of 13 CORCs does not represent a material misstatement (i.e., the error is below the 5.0% material error rate), the number of corrections made to the CORC claim (via the Corrective Action Requests) is considerable, and the auditor has, in turn, formed a qualified audit opinion.

Table 1: Audited CORCs summary

Biochar	CORCs Under Audit	Net Error (CORCs)	Eligible CORCs	Net Error Rate (%)
Total	284	13 UC	297	4.6%

*OC = Overcalculation / UC = Undercalculation

Basis for Qualified Conclusion

The auditor identified gaps associated with the LCA calculations and the metering and monitoring system used by the Production Facility, including:

- A lack of energy metering systems and appropriate procedures for quantifying and managing the energy consumed in the biochar production process.
- The following misstatements were noted:
 - o The total diesel, electricity and water consumption data for the production period considered in the LCA.
 - o The energy content factor for diesel consumption considered the energy content factor from a Swedish source instead of an Australian energy content factor.
 - o The emission factor used for the electricity consumption of the Production Facility considered Western Australia electricity emissions factor instead of a South Australian emissions factor.
 - o The infrastructure, chemical and flue gas emissions calculations in the LCA.
 - o The moisture content calculations in the LCA.
- Review and amendment of the $E_{\text{production}}$ and E_{use} boundaries and calculations.

Based on the issues listed above, the auditor's opinion is that additional work will be required by Jeffries Group to fully demonstrate compliance with all Output Audit Requirements of the Biochar Methodology Edition 2022 v3, and this should be completed prior to the next audit.

Ongoing Issuance and Digital Monitoring, Reporting and Verification

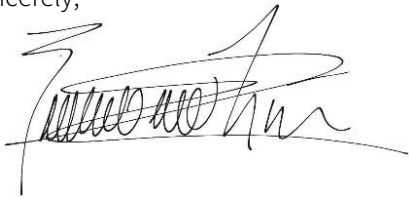
As per Appendix A of the Puro Rules, the auditor has considered the Production Facility and the internal processes, controls and systems to form an opinion over the ongoing issuance and digital monitoring, reporting and verification (DMRV).

In the auditor's opinion, the L.F Jeffries Nominees Pty Ltd (t/a Jeffries Group) Production Facility at 515 Brooks Rd, Buckland Park SA 5120, Australia has:

- Demonstrated regular industrial operations; and
- Completed a performance verification review (i.e. this audit) for the previous monitoring period with over 3 months of Output.

Nevertheless, the Output Audit Report provided a Qualified Conclusion and contained six (6) corrective action requests. Furthermore, the auditor issued four (4) recommendations to be implemented by the next audit. Consequently, the auditor recommends Jeffries Group to undertake an additional Output Audit, under the New Puro Rules prior to be eligible to the ongoing issuance of certificates.

Sincerely,



Rodrigo PARDO PATRON | Director of Engineering
EnergyLink Services Pty Ltd
Lead Auditor
28 October 2024

Part B: Detailed Findings

Audit Findings and Conclusions

Table 2 to Table 6 summarise the findings from the Production Output Audit. As part of the audit procedures, the auditor performed interviews with site representatives and a virtual site visit to the Production Facility. Where possible, the findings from these procedures were used to validate that the eligibility criteria under the methodology had been met, that the proofs and evidence provided by the audited body were accurate, and that the metering used to quantify the Output was appropriate and correctly calibrated (for details refer to Appendix C).

Eligibility Assessment

Table 2: Eligibility Assessment

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the biochar is used in applications other than energy.	Y	The auditor confirmed the produced biochar is used by Jeffries Group as an input for an organic fertiliser product, which is being commercialised by Jeffries Group. Jeffries Group confirmed that no pure biochar was sold during the reporting period; all biochar sold was blended with compost or other fertilizer ingredients in pellets. For blending, 20% biochar is mixed with 80% of Jeffries Organic Compost and mixed in an open windrow.	N/A.
Confirm that the biochar is produced from sustainable forest or waste biomass raw materials.	Y	The auditor confirmed that the biochar was produced from waste biomass raw materials. Moreover, the auditor confirmed through the evidence provided by Jeffries Group that the feedstock biomass used for biochar production was sourced from a variety of sources, primarily focusing on municipal green waste and kerbside green organics, including Food and Garden Organics (FOGO) waste collection service. Jeffries Group has contracts with metropolitan councils and private companies, which supply them with these materials. Additionally, Jeffries sources feedstock from various commercial and industrial entities that deliver food waste and organic compostable materials to the Production Facility. The green waste undergoes a grinding process and is separated into amounts designated for the composting process and for biochar production.	N/A.

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the producer demonstrates net-negativity with results from a LCA that shows: – [A1 Biomass and A2 Transport of biomass] carbon footprint of the biomass production and supply. – [A3 Production] emissions from the biochar production process. – [A4 Transport of biochar to site] carbon footprint of the biochar end use. – [B1 Application and use] cradle to grave.	<u>Finding</u>	According to section 4.5 of the Biochar Methodology, 'all greenhouse gas emissions from the transportation and handling of biochar must be accounted for until it is used in a mineral matrix (such as soil or concrete) from which it cannot be separated'. Following the blending process, the biochar cannot be separated from the compost, marking the end of the biochar's life cycle assessment. Consequently, Jeffries Group reviewed their LCA boundary, including emissions related to the blending of biochar with compost and excluding emissions associated with the transportation and spreading of the blended biochar in their LCA calculations. Except for the above, the auditor confirmed that the LCA provided by Jeffries Group included all information on the emissions of the different stages of the biochar cradle to grave life cycle.	Corrective Action Request 6 Recommendation 1
Confirm that the biochar production process meets requirements 1.1.4 to 1.1.6 of the Biochar Methodology, namely that: – It has considered the emissions related to the use of fossil fuels (coal, oil, natural gas). – there is no co-firing of fossil fuels and biomass in the same reaction chamber. – the pyrolysis gases are recovered or combusted. – the molar H/C_{org} ratio is less than 0.7.	Y	The auditor confirmed that although the CCT system is an auto-thermal process in which the thermal energy required to run the process was created from the feedstock being processed, the system used a diesel burner to start up the process approximately once per week and last two hours. The diesel consumption was considered the emissions calculations. Additionally, the auditor confirmed that there is no co-firing of fossil fuels and biomass in the same reaction chamber. Although the Jeffries Group Facility was not operational during the virtual site visit due to equipment maintenance, Jeffries provided operational records extracted from a SCADA-style system, confirming the facility's operation during the reporting period. Moreover, the auditor confirmed that the pyrolysis gases were captured and combusted in thermal oxidisers to generate heat that powers the pyrolysis reactor. It is noted that the facility has a boiler and three Organic Rankine Cycle (ORC) turbines for electricity production which are intended to be used but have not been commissioned yet. The intention is for most of the electricity generated to be used internally to operate a compost and mulch screening plant, with any surplus to be exported back to the grid. The molar H/C_{org} ratio is 0.4, which is less than 0.7.	N/A.

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that measures are taken for safe handling and transport of biochar to prevent fire and dust hazards.	Y	The auditor confirmed via discussions with Jeffries Group personnel that appropriate safety measures were taken to ensure the safe handling and transport of the biochar. Additionally, Jeffries Group presented Safety Data Sheets (SDS) of the biochar produced.	N/A.

Standing Data

Table 3: Record Keeping

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the standing data of the Production Facility and the CO ₂ Removal Supplier was collected and checked.	Y	The auditor confirmed that the standing data of the Production Facility and the CO ₂ Removal Supplier was collected and checked.	N/A.

Production Facility Assessment

Table 4: Production Facility assessment

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm the Production Facility Eligibility under the general rules of Puro Standard.	Y	The auditor confirmed that the Production Facility is eligible under the general rules of Puro Standard, and all necessary evidence had been provided.	N/A.
Confirm that the Production Facility demonstrate Environmental and Social Safeguards.	Y	The auditor confirmed that the CO ₂ Removal Supplier showed sufficient evidence to demonstrate that the Production Facility does no significant harm to the surrounding natural environmental and local communities.	N/A.

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the Production Facility demonstrate additionality, that the CO ₂ removals are a result of carbon finance, and that the project is not required by existing regulations or other obligations.	Y	The auditor confirmed that the CO ₂ Removal Supplier showed sufficient evidence to demonstrate that the project meets the requirements of Clause 1.2.3 of the Biochar Methodology.	N/A.
Confirm that the quantity of biochar produced and sold is documented via appropriate processes.	<u>Finding</u>	The auditor confirmed that an appropriate system was in place to quantify the biochar sold during the reporting period. However, the auditor noted that the total biochar production was calculated based on the wet 'activity tonnage', excluding the moisture content of the wet biochar. Due to the finding in Corrective Action Request 5, the auditor has issued a recommendation to address this for future claims.	Corrective Action Request 5 Recommendation 1
Confirm that metering infrastructure is in place to determine: – the production output. – the energy use of the Production Facility.	<u>Finding</u>	To determine the diesel, electricity, and water consumption required for biochar production, Jeffries Group use an internal spreadsheet titled ' <i>Biochar Plant Hours Logs_Elec_Diesel_Water_Calcs</i> '. This spreadsheet includes manual records from the CCT system, such as Start Time, Feed Start, Hearth Burner Off, Oxidiser Burner Off, and Plant Stop. Using the recorded operational hours and internal assumptions, Jeffries Group calculate the consumption of diesel, electricity, and water to estimate emissions for the biochar produced. The auditor confirmed during the virtual site visit and through additional evidence, that appropriate metering infrastructure was in place to quantify the produced biochar.	Recommendation 2

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm the calculations used to quantify emissions from the process. These must account for: – The energy created by the biochar. – The energy source used in the production process. – Cultivating and harvesting of raw materials (forest vs other biomass). – Transporting of raw materials to the Production Facility (based on distance transported and fuel used).	<u>Finding</u>	The auditor identified gaps associated with the LCA calculations and the metering and monitoring system used by the Production Facility, including: - A lack of energy metering systems and appropriate procedures for quantifying and managing the energy consumed in the biochar production process. - The following misstatements were noted: - o The total diesel, electricity and water consumption data for the production period considered in the LCA. - o The energy content factor for diesel consumption considered the energy content factor from a Swedish source instead of an Australian energy content factor. - o The emission factor used for the electricity consumption of the Production Facility considered Western Australia electricity emissions factor instead of a South Australian emissions factor. - o The infrastructure, chemical and flue gas emissions calculations in the LCA. - o The moisture content calculations in the LCA. - Review and amendment of the $E_{production}$ and E_{use} boundaries and calculations. These misstatements resulted in the under-calculation of 13 CORCs. Except where noted above, the auditor confirmed that the LCA provided by Jeffries Group included all information on the emissions of the different stages of the biochar life cycle (cradle-to-grave).	Corrective Action Request 1 Corrective Action Request 2 Corrective Action Request 3 Corrective Action Request 4 Corrective Action Request 5 Corrective Action Request 6 Recommendation 1
Confirm the CO₂ Removal Supplier is able to calculate the CO₂ Removal independently.	Y	Except where noted above, the auditor reviewed the evidence provided by the audited body and confirmed that the CO₂ Removal Supplier was able to calculate the CO₂ removal independently.	N/A.

Quantification of CO₂ Removal

Table 5: Quantification of CO₂ Removal - Calculation Methodology

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the quantification of CO ₂ removal is calculated using the Calculation formula of CO ₂ removal.	Y	The auditor examined the CORC calculator provided by the audited body and confirmed that the formulas applied in the quantification of CO ₂ removal for biochar production were in accordance with the Puro Rules.	N/A.
Confirm that the inputs to the Calculation formula of CO ₂ removal are appropriate and consistent with the evidence provided.	<u>Finding</u>	The auditor found inconsistencies and errors in the inputs to the Calculation formula of CO₂ removal. The errors found varied on the source and nature and were all corrected during the course of the audit. The auditor has issued a recommendation to ensure checks are performed to the calculations prior to the creation of CORCs. A summary of the errors found by the auditor is provided in Appendix C. Additionally, Jeffries Group provided a single laboratory report for the entire reporting period. As biochar production involves varying feedstocks, such as different ratios of green organic waste and wood waste, these variations might not be reflected in the sole laboratory result. Once Jeffries Group has a comprehensive understanding of biochar properties, Jeffries Group can determine the appropriate frequency for conducting laboratory tests.	Recommendation 1 Recommendation 3

Verification of Proofs

Table 6: Verification of proofs and documentation

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the standing data for the Production Facility meets the requirements of the Biochar Methodology and is consistent with other evidence.	Y	The auditor reviewed and validated the standing data provided by the audited body and confirmed this was consistent with desktop testing and the virtual site visit.	N/A.

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Confirm that the necessary proof and evidence documents are maintained by the Production Facility as per Section 5 of the Biochar Methodology ² .	<u>Finding</u>	The auditor confirmed that, during the reporting period, Jeffries Group sold a soil improvement product containing biochar, rather than pure biochar. A review of their marketing materials and website confirmed that there were no references to carbon sequestration or claims of being “carbon positive”. Instead, the focus of their marketing material was on the benefits of the soil improvement product (i.e. a biochar-compost blend). However, to ensure completeness and transparency, Recommendation 4 is made to include a “no double-counting clause” in relevant documentation, providing explicit clarity regarding section 5.5.4 of the Biochar Methodology. Additionally, due to the findings in Corrective Action Request 5, the auditor noted that the total biochar production was calculated based on the wet ‘activity tonnage’, excluding the moisture content of the wet biochar. Considering the above, the auditor noted that Jeffries Group did not have appropriate processes in place to collect and maintain proof as per Section 5 of the Biochar Methodology. As a result, the auditor has issued two recommendations to address this for future claims.	Corrective Action Request 5 Recommendation 1 Recommendation 4

² Information in Section 5 of the Biochar Methodology includes:

- Proof of sustainability of raw material for forest and/or waste biomass.
- LCA data for biomass and biochar production.
- Justification on the soil temperature used for the calculation of the biochar sequestration.
- Proof of product quality, production volume, sales and end use of biochar.
- Proof of no double counting/C positive marketing.

Peer Reviewer Conclusion

Name of the peer reviewer	Katherine Simmons
Peer reviewer's credentials	• Bachelor of Engineering (Honours) in Polymer Engineering (minoring in Chemical Engineering). • Category 1 Registered Greenhouse and Energy Auditor with the Clean Energy Regulator (Australia). • Climate Active Registered Consultant. • Integrated Management Systems Lead Auditor ISO 19011, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018.
Peer reviewer contact details	Email: katherine.simmons@kreaconsulting.com.au Phone: +61 431 612 950
Outcome of the evaluation undertaken by the peer reviewer	I have reviewed the engagement letter, audit report and supporting work papers / source data and am satisfied that the audit has been performed in accordance with the eligibility requirements of General Rules of the Puro Standard General Rules Version 3.1.

Appendix A: Response to Previous Audit Recommendations

The Production Facility and Output audit dated 6 July 2022 (EnergyLink Services Pty Ltd) contained two (2) recommendations. The recommendations and the auditor's responses are provided in Table 7.

Table 7: Previous Audit Recommendation

Requirement	Requirement Met?	Verification Remarks
Recommendation (1): The auditor recommends that Jeffries Group augment their procedures used to assess the biochar tests reports when received by independent laboratories to ensure that there is no discrepancy in the results and ensure that the correct value for organic carbon content is considered.	Y	Except when noted in Corrective Action Request 4, the auditor was able to confirm that Jeffries Group augmented their procedures used to assess the biochar tests reports when received by independent laboratories to ensure that there is no discrepancy in the results and ensure that the correct value for organic carbon content is considered. As such, the auditor is satisfied this recommendation has been addressed.
Recommendation (2): EnergyLink Services recommends that the H/C_{org} and O/C_{org} molar ratios are correctly calculated, reflecting the molar content of the elements within the samples to ensure that the requirements of clause 1.1.11 of the Annex A: Biochar Methodology of the Puro.earth CO ₂ Removal Marketplace General Rules v2.2 are met.	Y	Except when noted in Corrective Action Request 4, the auditor was able to confirm that the H/C_{org} and O/C_{org} molar ratios are correctly calculated. As such, the auditor is satisfied this recommendation has been addressed.

Appendix B: Table of Site Visit Findings

Table 8: Site visit summary table

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Check that the raw material is of eligible type and sustainably sourced.	Y	Jeffries acquires their feedstock from a variety of sources, primarily focusing on municipal green waste and kerbside green organics, including Food and Garden Organics (FOGO) waste collection service. They have contracts with metropolitan councils and private companies, which supply them with these materials. Additionally, Jeffries sources feedstock from various commercial and industrial entities that deliver food waste and organic compostable materials to the production facility. The green waste undergoes a grinding process and is then separated into amounts designated for the composting process and for biochar production.	N/A.
Check that the LCA provided is consistent with observations on site.	Y	Except where noted in Corrective Action Request 6, the auditor confirmed LCA provided was an accurate representation of the Production Facility and used appropriate assumptions where necessary.	N/A.
Confirm that the LCA considered the emissions related to the use of fossil fuels (coal, oil, natural gas) for ignition, pre-heating, or heating of the pyrolysis reactor. Additionally, there is no co-firing of fossil fuels and biomass in the same reaction chamber.	Y	The auditor confirmed that although the CCT system is an auto-thermal process in which the thermal energy required to run the process was created from the feedstock being processed, the system used a diesel burner to start up the process approximately once per week and last two hours. The diesel consumption was considered the emissions calculations. Additionally, the auditor confirmed that there is no co-firing of fossil fuels and biomass in the same reaction chamber.	N/A.
Evidence of safe handling and transport is provided and adequate for the production facility.	Y	The auditor confirmed via discussions with Jeffries Group personnel that appropriate safety measures were taken to ensure the safe handling and transport of the biochar. Additionally, Jeffries Group presented Safety Data Sheets (SDS) of the biochar produced.	N/A.

Requirement	Requirement Met?	Verification Remarks	Corrective Action Request / Recommendations
Check that the Production Facility's documentation system is accurate and reliable for recording the quantity of biochar produced and sold.	<u>Finding</u>	The auditor confirmed that an appropriate system was in place to quantify the biochar sold during the reporting period. However, the auditor noted that the total biochar production was calculated based on the wet 'activity tonnage', excluding the moisture content of the wet biochar. Due to the finding in Corrective Action Request 5, the auditor has issued a recommendation to address this for future claims.	Corrective Action Request 5 Recommendation 1
Check that appropriate metering infrastructure is in place and calibrated correctly to quantify the Production Facility output and the energy use of the Production Facility.	<u>Finding</u>	To determine the diesel, electricity, and water consumption required for biochar production, Jeffries Group use an internal spreadsheet titled ' <i>Biochar Plant Hours Logs_Elec_Diesel_Water_Calcs</i> '. This spreadsheet includes manual records from the CCT system, such as Start Time, Feed Start, Hearth Burner Off, Oxidiser Burner Off, and Plant Stop. Using the recorded operational hours and internal assumptions, Jeffries Group calculate the consumption of diesel, electricity, and water to estimate emissions for the biochar produced. The auditor confirmed during the virtual site visit and through additional evidence, that appropriate metering infrastructure was in place to quantify the produced biochar.	Recommendation 2
Check that appropriate processes are in place to quantify the inputs to the Calculation formula of CO ₂ removal for the purpose of Preparing the Output Report and calculating CORCs.	<u>Finding</u>	The auditor found inconsistencies and errors in the inputs to the Calculation formula of CO ₂ removal. The errors found varied on the source and nature and were all corrected during the course of the audit. The auditor has issued a recommendation to ensure checks are performed to the calculations prior to the creation of CORCs. A summary of the errors found by the auditor is provided in Appendix C. Additionally, Jeffries Group provided a single laboratory report for the entire reporting period. As biochar production involves varying feedstocks, such as different ratios of green organic waste and wood waste, these variations might not be reflected in the sole laboratory result. Once Jeffries Group has a comprehensive understanding of biochar properties, Jeffries Group can determine the appropriate frequency for conducting laboratory tests.	Recommendation 1 Recommendation 3

Appendix C: Summary of Calculation Errors

A summary of the calculation errors and the associated impacts on CORC calculation is provided in Table 9.

Table 9: Summary of Calculation Errors

Source of Error	CORC claim	Corrected CORC calculation	Net Error (CORCs)	Net Error Rate (%)
The following misstatements were noted: - The total diesel, electricity and water consumption data for the production period considered in the LCA. - The energy content factor for diesel consumption considered the energy content factor from a Swedish source instead of an Australian energy content factor. - The emission factor used for the electricity consumption of the Production Facility considered Western Australia electricity emissions factor instead of a South Australian emissions factor. - The infrastructure, chemical and flue gas emissions calculations in the LCA. - The moisture content calculations in the LCA. Additionally, Jeffries Group reviewed and amended the $E_{\text{production}}$ and E_{use} boundaries and calculations.	284	297	13 UC	4.6%
Total	284	297	13 UC	4.6%

*OC = Overcalculation/UC = Undercalculation