



**Verified Carbon
Standard**

REDUCED EMISSIONS FORM IMPROVED AND EFFICIENT COOKING IN UGANDAN COMMUNITIES

VKU Certification Pvt. Ltd.

Regd. Off: Flat No. 306, Sky Star, N-1, New Rani Bagh, Khandwa Road, Indore, Madhya Pradesh, India - 452020

URL: <http://vkucertification.com> | e-mail: info@vkucertification.com

Report ID	VKU.VER.184.24_VCS_3045
Project title	Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities
Project ID	3045
Verification period	01-August-2022 to 31-December-2023 (Including both the dates)
Original date of issue	30-March-2024
Most recent date of issue	26-July-2024

Version	02
VCS Standard Version	4.6
Client	PERSISTENTCLIMATE INDIA PRIVATE LIMITED
Prepared by	VKU Certification Pvt. Ltd.
Approved by	Dr. Vikas Kumar Aharwal (Founder and Director) vikas.aharwal@vkucertification.com
Work carried out by	Barun Kumar – Team Leader & Technical Expert T.A 3.1 Vivek Kumar Ahirwar – Technical Reviewer & Technical Expert T.A 3.1 Aastha Verma – Validator Verifier Trainee Megha Modi – Project Trainee Maurice Kabikabule – Local Expert (Host Country of Uganda)

Summary:

VKU Certification Pvt. Ltd. (hereafter referred as VKU) has been commissioned by PERSISTENTCLIMATE INDIA PRIVATE LIMITED to verify the greenhouse gas emission reductions reported for the project activity “Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities” covering monitoring period from **01-August-2022 to 31-December-2023** (Inclusive of both the dates) under 10 years fixed crediting period starting from **02-January-2021 to 01-January-2031** (including both the dates) with regard to the relevant requirements for VCS Standard 4.6 dated 21-March-2024.

Purpose: The purpose of this verification is to have an independent review and ex-post determination by an independent entity of the monitored GHG emission reductions and the contributions to sustainable development. And verify that monitoring methodology has been implemented according to the monitoring plan as part of the registered Joint VCS PDD & MR the GS SDG monitoring matrix and the applied approved monitoring methodology and monitoring data, used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive, and presented in a concise and transparent manner.

The verification scope of the project is:

- To verify that the project is implemented as described in the registered VCS Joint PD & MR/B01/
- To assess the project’s compliance with other relevant rules including the host country legislation (Uganda).
- To confirm that the monitoring system is implemented and fully functional to generate voluntary carbon units without any double counting.
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures describes in the monitoring plan of registered VCS Joint PD & MR/B01/, which also includes the sampling of ICS as per the CDM sampling guidelines /B09/ and CDM sampling standard/B10/.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.

- To verify that reported GHG emission data is sufficiently supported by evidence.

Verification was conducted using VKU's procedures in-line with the requirements specified in the VCS program guide version v4.4/B04/, VCS standard version 4.6/B03/, VCS validation and verification manual version v3.2/B05/ and applying standard auditing techniques.

The verification consisted of desk review, random acceptance sampling of the ICS, remote audit assessment and the resolution of outstanding issues and the issuance of the final verification report and certification.

The assessment team ensured that the reported emission reductions are complete and accurate in accordance with applicable VCS requirements in order to be certified therefore the assessment team has detected no further uncertainties.

The GHG emission reductions were calculated on the basis of approved methodology VMR0006: 'Methodology for installation of High Efficiency Firewood Cookstoves', version 1.1/B07/, the monitoring plan included in the joint PD&MR/B01/.

VKU followed the rule-based approach to perform this verification. During the verification, **03 Corrective Action Requests (CARs) and 06 Clarification Requests (CLs) and 00 Forward Action Request (FARs)** were identified related to operation, monitoring and GHG emission reduction calculation of the VCS project activity in relation to all relevant VCS requirements for the project activity and the applied baseline and monitoring methodology, and these CARs and CLs are successfully closed after necessary corrections/clarifications by the client. The same has been discussed in [Appendix 04](#) of this verification report.

Summary of the verification conclusion:

In conclusion, it is VKU's opinion that the project activity **"Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities"**, VCS project ID 3045, meets all the relevant requirements for VCS standard and guidelines and correctly applies the baseline and monitoring methodology VMR0006: 'Methodology for installation of High Efficiency Firewood Cookstoves', version 1.1/B07/.

The monitoring system is in place and the emission reductions are calculated without material misstatements. Hence, VKU is able to certify that the emission reductions from the project during the 2nd monitoring period from **01-August-2022 to 31-December-2023** (inclusive of both the dates) under the fixed crediting period of 10 years from starting from **02-January-2021 to 01-January-2031** (including both the dates) amounts to **453,602 tCO₂e**

CONTENTS

1	INTRODUCTION	7
1.1	Objective	7
1.2	Scope and Criteria	8
1.3	Level of Assurance.....	9
1.4	Summary Description of the Project	10
2	VERIFICATION PROCESS	12
2.1	Method and Criteria.....	12
2.2	Document Review	16
2.3	Interviews	19
2.4	Site Visits	23
2.5	Resolution of Findings	39
2.6	Eligibility for Validation Activities	40
3	VALIDATION FINDINGS	40
3.1	Methodology Deviations.....	40
3.2	Project Description Deviations.....	41
3.3	New Project Activity Instances in Grouped Projects.....	41
3.4	Baseline Reassessment	41
4	VERIFICATION FINDINGS.....	42
4.1	Project Details	42
4.2	Safeguards and Stakeholder Engagement	47
4.3	Accuracy of Reduction and Removal Calculations.....	60
4.4	Quality of Evidence to Determine Reductions and Removals.....	66
4.5	Non-Permanence Risk Analysis.....	76
5	VERIFICATION OPINION.....	76
5.1	Verification Summary	76
5.2	Verification Conclusion	77
5.3	Ex-ante vs Ex-post ERR Comparison	78
	APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION	81
	APPENDIX 2: ABBRIVIATIONS.....	82

APPENDIX 3: SAMPLING SURVEY SHEET QUESTIONNAIRE	84
APPENDIX 4: AUDIT FINDINGS	86
APPENDIX 5: COMPETENCE STATEMENTS	111

1 INTRODUCTION

1.1 Objective

This report summarizes the findings of the verification of the project, performed on the basis of VCS Requirements and UNFCCC criteria for CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The objectives of this verification exercise are, by review of objective evidence, to establish:

- An independent evaluation of project activity by an accredited validation and verification body (VKU Certification Pvt. Ltd.) against the requirements of the VCS Program Guide Version 4.4/B04/, VCS standard version 4.6/B03/;
- The project activity has been implemented and operating as per the VCS project description (Joint PD&MR)/B01/ and that all the physical features (including technology, project equipment and monitoring) of the project are in place;
- Monitoring report/01/, Emission Reduction Spreadsheet/02/ and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology/B07/ and approved monitoring plan/B01/.
- To confirm that the monitoring system is implemented and fully functional to generate Verified Carbon Units (VCUs) without any double counting/06/.
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation as per the VCS Standard version 4.6/B03/, ISO 14064-3 /B12/and ISO 14065/B12/.

The verification process aimed to confirm the seamless implementation and full functionality of the monitoring system, ensuring the accurate generation of Verified Carbon Units (VCUs) without any instances of double counting/06/. Additionally, meticulous scrutiny of the monitoring records and emissions reduction calculations has been carried out to guarantee the precision as allowed by the sampling requirements, completeness, consistency, transparency, and absence of any material errors or omissions in the reported data. This aims to establish the reliability and integrity of the data.

1.2 Scope and Criteria

The scope of this verification is the independent, objective review and ex-post determination by an independent entity of the monitored reduction in GHG emissions and the contribution to sustainable development from the project “**Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities**” (VCS ID 3045) for the period from 01-August-2022 to 31-December-2023 (including both the dates). The verification of the project was based on the Joint validation and verification report/B02/, registered VCS Joint PD&MR/B01/, monitoring report/01/ and ER calculation spreadsheet/02/ along with the supporting evidences submitted by project proponent to the VKU assessment team and the information collected through performing interviews during the remote assessment. Furthermore, publicly available information was considered as far as available and required.

The verification is carried out against the following guidance & protocol:

- VCS Programme Guide Version 4.4/B04/
- VCS Standard version 4.6/B03/
- VCS Program Definitions Version 4.4/B06/
- VCS Validation and Verification manual version 3.2/B05/
- VKU.SOP.04. Process Requirements /19/

The project is assessed against the requirements of VCS standard v4.6/B03/, VCS program guide version 4.4/B04/, VCS validation and verification manual version 3.2/B05/ and related rules and guidance. VKU has, based on the recommendations in the latest version of CDM Validation and Verification Standard for Project Activities version 3.0/B13/, CDM Project Standard for Project Activity/B14/ and employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The method and criteria used for verification consisted of the following phases:

- Desk review of MR/01/ and ER/02/ and additional supporting documents and evidences listed in section 2.2 of this report. for current monitoring period, as per the VCS Programme Guide Version 4.4/B04/, VCS Standard version 4.6/B03/, VCS Program Definitions Version 4.4/B06/, VCS Validation and Verification manual version 3.2/B05/, registered Joint PD&MR/B01/

- Interviews during the Remote Audit with focused questionnaires ([appendix 3](#)) and [Field Assessment Checklist](#) related to cross verify the monitoring survey result represented in the survey report/05/ with End-Users, Stakeholders & PP representatives involved in project's implementation/12/.
- Resolution of outstanding issues and Completeness check and issuance of final verification report and applicable VCS Verification Deed of Representation.

Verification is not meant to provide any consultancy to the project proponents. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring which is as per the ISO 14064-3 and ISO14065.

1.3 Level of Assurance

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent VKU's procedure, with a **Reasonable level of assurance**.

The verification report is based on the monitoring report/01/, registered VCS joint PD&MR/B01/, supporting documents made available to the assessment team and information collected through performing interviews during the remote audit/10/ and /12/.

The technical review was performed by a technical reviewer(s) qualified in accordance with VKU's qualification procedure.

Table 01: The assessment team consists of the following personnel

Role/Qualification	Last Name	Middle Name	First Name
VCS Team Leader & Technical Expert TA 3.1	Kumar	N/A	Barun
Validator/ Verifier-Trainee	Verma	N/A	Aastha
Project Trainee	Modi	N/A	Megha
Local Expert (Uganda)	Kabikabule	N/A	Maurice

Table 02: The technical reviewer consists of the following personnel

Role/Qualification	Last Name	Middle Name	First Name
Technical Reviewer & Technical Expert TA 3.1	Ahirwar	Kumar	Vivek

The threshold for quantitative materiality with respect to the aggregate of errors, omissions and misrepresentations, relative to the total reported GHG emission reductions and/or removals was limited to 1%, as per **section 4.1.10 of the VCS Standard version 4.6/B03/**. As the project is a large project, The materiality of the project activity based on actual emission reduction achieved is **1%** of **453,602 tCO_{2e}** which is equal to **4,536.02 tCO_{2e}**.

1.4 Summary Description of the Project

As per the registered Joint PD & MR/B01/ and remote audit of current monitoring period;

Project Proponent and Baseline scenario: The project is a grouped project and has 1 project activity instance. The implemented grouped project reduced greenhouse gas emissions by distributing fuel-efficient Improved Cook Stoves (ICS) in various regions of Uganda. The Project activity is implemented by PersistentClimate India Private Limited with local partners in Uganda which resulted in an increase access of households and communities to improved cookstoves by disseminating Improved Cook Stoves featuring high thermal efficiency and low greenhouse gas emissions.

In addition to GHG reductions, the ICS benefits the user from high fuel costs and reduced exposure to health-damaging indoor air pollutants. As per baseline study, the equivalent cooking needs could have been met by traditional inefficient stoves. Charcoal and wood fuel would have been utilized in less efficient, traditional cooking stoves in the baseline scenario.

Location: The project activity is implemented within the geographical boundary of Uganda. Distribution of ICS are in Mbale, Jinja, Tororo, Wakiso, Sironko tc, Kampala and Manafwa of Uganda.

Crediting Period and its length: 02-January-2021 to 01-January-2031 (fixed for 10 years) both dates included

Current Monitoring Period: 2nd 01-August-2022 to 31-December-2023 (Inclusive of both dates)

Previous Monitoring Period: 1st 02-January-2021 to 31-July-2022 (Inclusive of both dates)

Date of 1st Installed ICS: 02-January-2021

The total number of ICS distributed in this grouped project activity till the end date of current monitoring period are 58,793. Each ICS has been allocated a unique serial number and a beneficiary agreement has been executed between end users and PP/21/. PERSISTENTCLIMATE INDIA PRIVATE LIMITED is the project proponent (PP) of the proposed project.

The ICS distributed under this grouped project activity are of following three models and their installation details and the efficiency /03/ of each stove at the start of the crediting period is as mentioned in the table below as per registered PD & MR/B01/:

Table 03: Distributed Stove details

Stove type	Fuel used	Total ICS distributed	Efficiency of ICS (η_p)
Burn Jikokoa stove	Charcoal fired	13,027	0.537
Burn Kuniokoa stove	Wood fired	549	0.424
Masupa stove	Charcoal fired	45,217	0.382

Survey Date: 19-December-2023, 20-December-2023, 21-December-2023, 22-December-2023, 28-December-2023, 29-December-2023 and 30-December-2023

Estimated ERs: The estimated (ex-ante) annual reduction over a 10-year fixed crediting period is 3,342,291 tCO_{2e}, estimated annual average is 334,229 (rounded down) and for current monitoring period total estimate ERs are {for year 2022 (152,895tCO_{2e}) and for year 2023 (363,168tCO_{2e})} 516,063 tCO_{2e} as per the registered PD&MR/B01/.

Actual ERs: And total GHG emission reduction achieved during the current monitoring period is 453,602 tCO_{2e} (For vintage year 2022, 133,979 tCO_{2e} and for vintage year 2023, 319,623 tCO_{2e}).

2 VERIFICATION PROCESS

The registered VCS grouped project activity “**Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities**” (VCS ID 3045) is undergoing the second verification, which is undertaken by VKU Certification Pvt. Ltd. for the second monitoring period starting from 01-August-2022 to 31-December-2023 (both dates included).

2.1 Method and Criteria

Verification was conducted using VKU’s procedures in line with the requirements specified in the VCS Requirements, i.e., VCS Program Guide Version 4.4/B04/, VCS standard version 4.6 /B03/and VCS Validation and Verification manual version 3.2/B05/. The project activity falls under the category of “grouped projects”.

Verification team conducted remote audit on **08-March-2024 to 09-March-2024**. Before conducting Remote Audit, ICT (Information and Communication technology) test call was conducted, after successful test call, verification team conducted the video call on ZOOM application and for evidence video call is recorded with concern of Project Proponent. Verification Team done risk analysis and strategic plan before conducting remote audit.

Risk analysis and detailed audit testing planning:

For the identification of potential reporting risks and the necessary detailed audit testing procedures for residual risk areas table 04 is used. The structure and content of this table is given below:

Table: 04:

Identification of potential reporting risk (Risk that could lead to material errors, omissions or misstatements)	Identification, assessment of potential risk	Assessment of the records/information/interview with personnel to check controls/ mitigation measures
The following potential risks were identified and	The low risk have been identified in the course of the	Check of trainings Check of responsibilities

divided and structured according to the possible areas of occurrence:	monitoring project implementation. The following measures were taken to minimize the corresponding risks.	Check of QA/QC documentation
1. Dysfunction of installed equipment 2. Maloperation by operational personnel.	1. Internal data review 2. Training 3. Internal check of QA/QC measures of involved parties.	

Note: The risk assessment is performed and the results are provided in the **table 09** of this report.

The assessment team employed sampling methods for the verification of the GHG emission reductions from the project activity in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0/B10/.

The GHG emission reductions or removals are based on the approved baseline and the applied methodology VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1/B07/. The tool utilized for GHG emission reduction calculations is Tool 30: Calculation of the fraction of non-renewable biomass, version 03/B08/.

- **Scope:** 03 Energy Demand
- **Project type:** Type II – Energy efficiency improvement projects.
- This is a grouped project activity

Aligned with the standard guidelines of ISO (14064-3; 2019, clause 06 & 14065-2020, clause 09)/B12/, the assessment team has outlined the procedure for conducting verification of the project and has followed the same throughout the execution of the audit of the mentioned project (i.e., VCS 3045).

The verification consisted of the following phases:

1. **Document (Desk) review:** During the desk review all documents initially provided by the client and publicly available documents relevant for the verification were reviewed. The main documents are listed below:
 - the registered version of the Joint VCS PD & MR/B01/, additional Annexes and further attached documents, including the monitoring plan /Joint VCS PD & MR/.
 - Monitoring report/01/ including the claimed emission reductions for the project documentation of previous verifications/VER/
 - The emission reduction calculation spreadsheet/02/
 - Usage Survey Form and result/04/

Other supporting documents, such as publicly available information on the VERRA website, on the UNFCCC website and background information were also reviewed.

2. **Strategic Analysis:** Assessment team performed strategic analysis to understand the activities and complexity of the project, and to determine the nature and extent of the verification activities. The results of the strategic analysis shall be used in the risk assessment. Refer table 09 provided in this verification report.
3. **Risk assessment:** Assessment team performed risk assessment of the GHG statement to identify the risk of a material misstatement or nonconformity with the criteria /13/.
4. **Planning and Intimation to VERRA about the remote audit:** During the desk review, all the documents initially provided by the client and publicly available documents relevant to the verification were reviewed. As per the paragraph 4.1.12 and 4.1.13 of the VCS Standard version 4.6, the assessment team performed a risk assessment, strategic analysis and finalized that to conduct a remote audit of the project. Assessment team digitally shared a Notice of Verification Services (NOVS) forms to VERRA. NOVS form intimated to VERRA registry before 15 business day of remote audit date.

As per clause 4.1.12 of VCS Standard version 4.6, it is not mandatory to conduct site visit since this is the second verification of the project after validation. During, the desk review of the submitted documents and evidences, VVB confirms that this verification does not include project baseline reassessment and also no deviation has been applied that impact the applicability of methodology, additionality or the appropriateness of the baseline scenario. It has been decided by the VVB to conduct a remote assessment based on the independent risk assessment. Thus, as per the clause 3.3.1.1 of the Validation and Verification Manual, Version 3.2, and guidelines provided in Annex A.2.4.6 of ISO 14064-3, VVB conducted a risk assessment to identify area that may result in material discrepancy and residual risks.

5. **Evidence gathering activities:** The assessment team has adopted a risk-based approach to develop evidence-gathering activities aimed at gathering adequate and relevant evidence to support conclusions. This process assesses whether the greenhouse gas (GHG) statement aligns with established criteria, considering the principles of applicable standards or GHG programs /17/.
6. **Audit and sampling plan:** Including all sub-elements required for an integrated verification process aligned with the contract, scope, objectives, level of assurance and materiality, an audit plan for the remote audit was prepared and the same was documented in VKU.F24W. Audit and Sampling Plan_VKU.VER.184.24_VCS_3045/14/. The sampling approach conducted is in accordance with “Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” version 04.0 and the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities version 09.0”. As the population is relatively homogeneous (for a given stove type) with respect to the object of the sampling effort, simple random sampling method is adopted for verification of the parameters.
7. **Evidence gathering plan:** The evidence-gathering plan is prepared based on the results of the VKU’s Assessment Team’s risk assessment. It was designed to lower the verification risk to an acceptable level. · The evidence-gathering plan thus specify the type and extent of evidence-gathering activities/16/
8. **Client Confirmation and Approval:** The remote audit plan is sent to the client for review and confirmation/approval via email.
9. **Document Review (Desk Review):** Relevant documents, such as the previous verification report, monitoring plan, methodology, VCS Joint PD & MR and QA/QC procedures are thoroughly reviewed.
10. **Remote Assessment:** This includes interviews and evaluation of the actual project scenario through remote audit. /09/. The VVB has applied remote audit techniques to conduct remote assessment using medium like Zoom Calls and telephonic calls. This verification report has been provided with a transparent disclosure in remote site assessment including explanation on other means utilized/ applied to verify the onsite information.

11. **Resolution of Discrepancies:** Any non-conformities identified during the assessment are addressed and resolved. Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion is issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued. The final report summarizes the final assessments with respect to all applicable criteria.
12. **Independent Review:** A technical reviewer provides an independent assessment for the project. Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision-making process up to the technical review. As a result of the technical review process, the verification opinion and the topic specific assessments, as prepared by the verification team leader, may be confirmed or revised. Furthermore, reporting improvements might be achieved.
13. **Final Verification:** After completeness checks, the verification report and certification are issued.

2.2 Document Review

During the document review, VKU has applied standard auditing techniques to evaluate the quality of information provided. The verification was performed primarily based on the review of VCS monitoring report of the project activity “**Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities**”, version 01 dated 07-February-2024 and the revised version 1.3 dated 24-July-2024/01/ and the emission reduction spreadsheet version 01 dated 07-February-2024 and the revised version 1.2 dated 04-April-2024/02/. In addition to this, the review of the registered VCS Joint PD&MR version 03 dated 05-February-2023/B01/ was also undertaken. In particular, the baseline estimations and the monitoring plan for the project was reviewed.

As per the requirement of clause 3.26.3 of VCS Standard version 4.6/B03/ it is an obligation for the project proponent to make available to the assessment team the required supporting documents and data needed to support statements and data as documented in the monitoring report.

The following **table-05** lists the documentation that was reviewed during the verification.

Table No.05: Reference table

Background Documents/ Weblinks	
B01	PersistentClimate India Private Limited: <u>Registered VCS Joint Project Description & Monitoring Report for “Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities”</u> Version 03 dated 05-February-2023
B02	4K Earth Science Private Limited: <u>Joint Validation & Verification report for the project "Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities" version 04 dated: 06-February-2023</u>
B03	VCS: <u>VCS Standard, version 4.6, dated 21-March-2024</u>
B04	VCS: <u>VCS Program Guide, version 4.4, dated 29-August-2023</u>
B05	VCS: <u>Validation & Verification Manual, version 3.2, dated: 19-October-2016</u>
B06	VCS: <u>Program Definitions, Version 4.4, dated: 29-August-2023</u>
B07	VCS: <u>VMR0006-Methodology for Installation of High Efficiency Firewood Cookstoves Version 1.1, dated 22-July-2021</u>
B08	<u>Tool 30-Calaculation of the fraction of non-renewable biomass Version 03.0</u>
B09	<u>UNFCCC: guidelines for Sampling and Surveys for CDM Project activities and Programmes of Activities, Version 4.0</u>
B10	<u>UNFCCC: Standard for Sampling and Surveys for CDM Project activities and Programmes of Activities, Version 09.0</u>
B11	<u>VERRA: Project Details, ID 3045</u>
B12	• <u>ISO 14064-1: 2018</u> • <u>ISO 14064-2: 2019</u> • <u>ISO 14064-3: 2019</u> • <u>ISO 14065: 2020</u> • <u>ISO/IEC17029: 2019</u>
B13	CDM Validation and Verification standard for project activity VERSION 3.0 https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921115831128/reg_stan06_v03.0.pdf

B14	CDM Project standard for project activity version 3.0 https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921115752577/reg_stan04_v03.0.pdf
Supporting documents Submitted by PP to VVB	
01	PersistentClimate India Private Limited: VCS Monitoring Report for “Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities”, Version 01 dated 07-February-2024 Version 1.1 dated 20-March-2024 Version 1.2 dated 04-April-2024 Version 1.3 dated 24-July-2024
02	PersistentClimate India Private Limited: Emission Reduction calculation spreadsheet for “Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities”, Version 01 dated 07-February-2024 Version 1.1 dated 20-March-2024 Version 1.2 dated 04-April-2024
03	Manufacturer’s Specification for ICS
04	Monitoring Survey questionnaire (attached with ER calculation sheet)
05	PersistentClimate India Private Limited: Monitoring Survey Records for the current Monitoring Period from 01-August-2022 to 31-December-2023, including both the dates
06	Declaration to avoid double counting, non-inclusion of project in other standards and Scope 3 (supply chain)
07	Grievance records for the current Monitoring Period from 01-August-2022 to 31-December-2023 (Including both the dates)
08	Project Installation database for the ICS distributed
09	Remote Inspection Photographs dated 08-March-2024 to 09-March-2024 for the current monitoring period
10	Remote Interview of stakeholders and end-users dated 08-March-2024 to 09-March-2024

11	VKU.F62W.Field Assessment Checklist_VKU.VER.184.24_VCS_3045
12	VKU.F46W. Attendance Sheet for Audit_VKU.VER.184.24_VCS_3045
13	VKU.F56W.Risk Assessment_VKU.VER.184.24_VCS_3045
14	VKU.F24W. Audit and Sampling Plan_ VKU.VER.184.24_VCS_3045
15	VKU.F60W.List of Documents_VKU.VER. 184.24_VCS_3045
16	VKU Certification Pvt Ltd: VKU.F72W.Evidence Gathering Plan_VKU.VER.184.24_VCS_3045
17	VKU Certification Pvt Ltd: Evidence Gathering Activities_VKU.VER.184.24_VCS_3045
18	VKU Certification Pvt Ltd: VKU.F70W. Strategic Analysis Plan_VKU.VER.184.24_VCS_3045
19	VKU Certification Pvt Ltd: VKU.SOP.04. Process Requirements
20	Google Earth Software Application (https://earth.google.com/)
21	End User Agreement for carbon credit generated cum Carbon Waveier document
22	Training records for the current monitoring period
23	VKU.F74W. sampling plan method and criteria
24	Training record of survey members
25	Employment Record and Company Composition List (Based on Gender) as evidence for Human Right and Gender Equality

2.3 Interviews

The Verification team interviewed 08 randomly selected end-users by zoom calls and telephonic means to confirm that they still possess an ICS which were part of the total sales records. The established sample size by VVB for this verification using Acceptance Sampling Techniques.

Applied Other Credible means of verification: The credible other means of verification is applied to cross check on-ground information as described below

Telephonic calls: During the telephonic assessment, the selected end users were interviewed and records for individual end user records, submitted by PP, were verified. The telephonic calls were recorded, stored and maintained so that the assessments of the Verification Team are traceable and reproducible if required.

Zoom calls: This tool has allowed connecting multiple stakeholders such as PP, project developer/ consultant, relevant personnel from monitoring survey team and the all-others relevant persons as per the organogram of the Joint VCS PD & MR, including QA/QC key personnel.

Remote assessment was conducted by the assessment team for the project activity. The representatives of the PP were interviewed by the assessment team during the remote audit conducted from 08-March-2024 to 09-March-2024 (both dates inclusive) /10/ and /12/.

The **tables 06** below provide a comprehensive overview of the interviews/10/ conducted by the assessment team. These tables outline the key personnel involved in the interviews, as per the VKU.F46W. Attendance sheet duly signed by PP and other representatives/12/ during the opening and closing meeting, along with their respective roles. The interviews specifically targeted individuals responsible for monitoring the project activity, data collection and management, as well as those involved in the quality assurance and quality control (QA/QC) procedures.

Table no 06: Details of Personnel Interviewed during Remote audit:

S. No.	Date	Name and Role	Organization	Topic
1	08-March-2024 to 09-March-2024	Lister Byamugisha (Male)	EZYLIFE HOLDINGS Ltd Managing Director	- Description of the project activity - Monitoring plan - ICS operational status - Emission reductions calculations
2		Fred Barasa (Male)	EZYLIFE HOLDINGS Ltd Business Development Manager, supervisor and stove distributor	- ICS implementation - Monitoring plan and monitoring arrangements - Data recording, data archiving, QA/QC procedures

				• Training to maintain cookstove • ICS commissioning details and operational status
3		Caroline (Female)	EZYLIFE HOLDINGS Ltd (Community engagement personal)	• CSR (Corporate Social Responsibility) activities • Trainings regarding raising awareness about cookstove projects
4		Devahita Ashwin (Female)	PersistentClimate India Private Limited (Operations Executive)	• Description of the project • Project implementation • Emission reduction calculations
5		Prakash Kumar Mishra (Male)	PersistentClimate India Private Limited (Founder and CEO)	• Ownership, avoidance of double counting • Project investment • Documentation • Benefits of the project activity.
6		Ivan Mukhowe	Team Leader, EZYLIFE Holdings Ltd	• Monitoring and ongoing communication with End Users.

Assessment team and the concerned personnel got engaged in several topics ranging from the description and implementation of project activity to technical details of project, distribution of cookstoves, monitoring survey, call over helpline number, training sessions, grievance resolution procedure etc.

The assessment was based on the feedback received during remote audit while interviewing /10/ the concerned personnel which is coupled with the documentation in VKU.F62W.Field Assessment Checklist for Sample Selected by VVB for Energy Demand & Distribution Projects/11/.

During the remote audit, assessment team also interviewed the end users or the beneficiaries/10/ involved in the projects to verify the implementation of grievance mechanism and process of grievance

resolution mentioned in the Monitoring Report/01/ submitted by the PP. The verification team interviewed beneficiaries (end users) /10/ as per questionnaires (appendix 3 of this report) to cross verify the monitoring survey reports and records. Moreover, verification team also observed that the project proponent (PP) facilitated opportunities for end users to voice their feedback and their concerns.

Table no 06: Details of Personnel Interview/Focussed Group Discussion with end users/beneficiaries

Topic of Discussion that was conducted with the end-users included:

- Interview during remote audit on the number of project devices operating during the year y ($N_{y,i,j}$)
- Evaluation of the baseline scenario, usage of pre-project device (if any)

S. No.	Date	Name and Gender	Stove ID and Model
1.	08-March-2024 to 09-March-2024	End User: Chelimo Saprina (Female)	• Stove ID; 142143030 (Kuniokoa)
2.		End User: Kakayi Lovanance (Female)	• Stove ID; 131278429 (Jikokoa)
3.		End User: Chelimo Judith (Female)	• Stove ID; 142142412 (Kuniokoa)
4.		End User: Mukimba Jenifer (Female)	• Stove ID: 131238397 (Jikokoa)
5.		End User: Nandutu Zita (Female)	• Stove ID: PCEL-MAS-CH-2756 (Masupa)
6.		End User: Chemutai Eunice (Female)	• Stove ID: 142142329 (Kuniokoa)
7.		End User: Nabulo Constance (Female)	• Stove ID: PCEL-MAS-CH-31313 (Masupa)
8.		End User: Cherop Agatha (Female)	• Stove ID: 131168745 (Jikokoa)

The responses of end users interviewed during the remote assessment of project are summarized as follows by the verification team:

- Traditionally, end users were using either three-stone stoves or claystoves (pre-project scenario).
- The project device (improved cookstove) is now in use, with no continued use of baseline stoves.
- End users have reported a significant decrease in fuel consumption with the project ICS with time savings
- Fuel use, either firewood or charcoal, varies among users, however, the bottom-line response is reduced fuel consumption in the project scenario
- End users are aware of contact details for relevant personnel regarding any issues with the ICS
- End users have confirmed the current cookstove's effectiveness in terms of fuel savings, and they have also given positive feedback on other impacts, such as health benefits due to less smoke, time and money savings, etc.
- Cooking locations vary, with some users cooking inside or outside or both, based on weather conditions
- End users have also noted cost savings due to reduced fuel requirements with the ICS

Hence, the verification team could verify that the installed cookstoves replaced baseline cookstoves (based on the sampling plan applied which is explained in section 2.4 below).

2.4 Site Visits

During the desk review, all the documents initially provided by the client and publicly available documents relevant to the verification were reviewed. As per the paragraph 4.1.12 and 4.1.13 of the VCS Standard version 4.6, the assessment team performed a risk assessment and finalized that to conduct a remote audit of the project. As per clause 4.1.12 of VCS Standard version 4.6, it is not mandatory to conduct site visit since this is the second verification of the project after validation. During the desk review of the submitted documents and evidences, VVB confirms that this verification does not include project baseline reassessment and also no deviation has been applied that impact the applicability of methodology, additionality or the appropriateness of the baseline scenario. It has been decided by the VVB to conduct a remote assessment upon request from PP and also based on the independent risk assessment. Thus, as per the clause 3.3.1.1 of the Validation and Verification Manual, Version 3.2, and guidelines provided in Annex A.2.4.6 of ISO 14064-3, VVB conducted a risk assessment to identify area that may result in material discrepancy and residual risks,

As per VCS Standard v4.6 para 4.1.12, and 4.1.13, and request of PP, VKU's assessment team conducted a **remote audit** of the given project from 08-March-2024 to 09-March-2024 (both dates are included) for current (2nd) verification.

PP's sampling approach:

With the objective of obtaining an unbiased estimate of population, PP has performed simple random sampling technique using 95/10 confidence/precision for all the parameters. It is concluded that sampling approach aligns with the Section 8.4 of the applied methodology /B07/ and paragraph 22 of the Sampling Standard version 09.0/B10/.

As per registered Joint PD&MR/B01/, the size of the project is under the category of large projects, hence 95/10 confidence/precision is adopted for all parameters by PP and verification team found it correct and in compliance with CDM Sampling standard v09.0/B10/. The monitoring parameters monitored through the sampling plan were as follows:

Table NO.07: Monitored parameters

Parameter	Description	Parameter type/frequency	Verification Assessment	Team
$N_{y,i,j}$	Number of project devices of type i and batch j operating during year y	Proportion/Biennially	As per the registered methodology and CDM Standard v09.0, verification team found it correct and in compliance.	
$\mu_{y,i,j}$	Adjustment to account for any continued use of pre-project devices during the year y	Proportion/Biennially		

Development of the verification and sampling plan (acceptance sampling):

The audit team has formally documented its audit plan as well as determined the evidence gathering plan. The audit plan is developed based on key elements of the verification process as per the criteria of engagement. The plan identifies and addresses the following:

- Level of Assurance
- Materiality
- Standards of evaluation & reporting for the verification including the assessment criteria
- Scope and objectives
- Assessment team and the roles of team members
- Schedule of verification activities

Verification approaches

- a) **ASP: Acceptance Sampling**
- b) SPL: Sampling Approach (all data available)
- c) CDC: Complete data check of data including all data aggregation steps
- d) COM: Full data check at higher data aggregation levels and sampling at original data levels document the rationale for the decision.

The team leader has devised a thorough sequence of events to guarantee a comprehensive, transparent, and prompt completion of the assessment task. This detailed plan encompasses all essential steps required to reach a well-founded final opinion. Such careful planning facilitates a methodical and structured assessment process, preventing any vital aspects from being disregarded or ignored. Apart from the organized sequence of events, the team has integrated different tools and methodologies to streamline the assessment planning process. These tools act as support systems for collecting and analyzing necessary information, thereby enhancing the efficiency and precision of the assessment. Such an approach ensures the inclusion of all pertinent factors and maintains a rigorous and unbiased assessment methodology.

Table 08: Step 1- Identification of Materiality threshold

Check the relevant box against applicable threshold level	Threshold as per Section 4.1.10 of VCS Standard version 4.6/B03/	Related to
---	--	------------

	1 %	Quantitative materiality, as per reporting standards, dictates that the threshold for materiality concerning the aggregate of errors, omissions, and misrepresentations, either individually or in combination, for any reported value in relation to total reported GHG emission reductions and/or removals assets, should not exceed one percent. In other words, discrepancies below this one percent threshold are considered immaterial and do not significantly impact the overall reporting accuracy. The verification of the stated materiality threshold is conducted through the PP's sampling survey /05/ and the acceptance sampling performed by the assessment team during remote audit of the project. Based on these findings, the reported results were accepted as valid and in compliance with the established materiality criteria.
---	------------	---

Table no.09 Step 2- Identification of risks, their level and assessment

S.No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the potential risk		Assessment of the records/information/interview with personnel to check controls/mitigation measures
		Risk level	Potential actions causing risk	
1.	Monitoring parameters			
	a. $N_{y,i,j}$: Number of project devices of type I and batch j operating during year y	Medium	Monitoring not done as per the registered Joint PD & MR	To mitigate the risk associated with the project claims, a thorough review of the VCS Joint project description & monitoring report (Joint PD & MR) and Monitoring Plan, in alignment with VCS requirements, conducted. Assessment team conducted extensive interviews with relevant stakeholders such as end users during the remote audit of the project and a thorough review of monitoring survey results. Assessment team interviews 08 randomly selected project ICS beneficiaries from the PD's monitored samples (acceptance sampling approach was followed) during the remote audit (refer section 2.3 of this report for the details of end-user's interview). All the end-users interviewed confirmed that the ICS are operationa and no issue is found regarding the working of ICS. End users gave positive feedback for the use of project device and confirmed that the project devices

				are operational and efficient in terms of fuel saving. Assessment team also verified the monitoring survey records/05/ provided by PP and found that the cookstoves of all the end users interviewed were found operation during the survey. Based on the insights provided by stakeholders/end users during the assessment process including remote audit (audio/video wherever possible) and their feedback on project's effectiveness, and also based on sectoral and local expertise of the assessment team mitigates any potential risks and ensures the accuracy and reliability of the reported data and related claims for the applied monitoring period. Assessment team verified onground information during remote audit mostly via video calls and in the event, network was not strong, through audio call. Nevertheless, pictures of all the interviewed project ICS were verified and found to be in line with remote assessment observations. Additionally, interviews conducted during remote audit also confirmed that the monitoring
--	--	--	--	---

				procedures were implemented according to the registered monitoring plan /B01/.
	b. Date of commissioning of batch j	Medium	Monitoring not done as per the registered Joint PD & MR	In order to mitigate the risk associated, assessment team conducted interviews during remote audit and a thorough assessment of system in place. Assessment team interviewed project beneficiaries and verified the end user agreements to verify the date of ICS distributions. By employing these rigorous review processes and verification activities, the project addresses and mitigates any potential risks and ensure the accuracy and reliability of the reported data.
	c. μ_y : Adjustment to account for any continued use of pre-project devices during the year y	Medium	Monitoring not done as per the registered Joint PD & MR	The parameter is calculated based on sampling survey and sample size are calculated based on the applied methodology/B07/. This review ensures that the claims are consistent and compliant with the established VCS guidelines as stated in VCS standard version 4.6/B03/ and adopted methodology for the project i.e., VMR0006, version 1.1/B07/. The methodology used for monitoring of continuous use of baseline is in accordance with Data / Parameter of the methodology AMS-II.G, version 12. 95 /10 confidence / margin of error is achieved for the

				sampling parameter as per para 22 of Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0. As a result of comprehensive interviews and monitoring survey report/05/ the Assessment Team thoroughly evaluated the systems in place, successfully reducing the risk of non-compliance in monitoring within the uncertainties inherent in the sampling guidelines and methodology.
	d. $\eta_{new,i,j}$: Efficiency of the device of each type i and batch j implemented as part of the project activity	Low	Monitoring not done as per the registered Joint PD & MR	To mitigate the associated risks with the parameter, a thorough review of the VCS Joint project description & monitoring report (Joint PD & MR) and Monitoring Plan, in alignment with VCS requirements, conducted. Assessment team confirmed checked the compliance of monitoring frequency with registered applied methodology /B07/ and the appropriateness WBT Summary sheet of ER Calculation sheet/02/. The background documents such as the manufacturer's specifications/03/ were cross check. It is confirmed by the assessment team that the efficiency of the implemented project device is calculated as per the Equation 5 given in the methodology/B07/.

				Additionally, discussions with key stakeholders (referenced as /10/) were held to gather insights and perspectives from those connected to or impacted by the project. By utilizing these stringent review processes and verification activities, the project can manage and mitigate potential risks, thereby ensuring the accuracy and reliability of the data reported.
2.	Project design: Information on project design without adequate controls related to data, evidences (project/sector related)	Low	Project design incorrectly described thus leading to incorrect delineation of the baseline scenario, causal change, threats to the project	To mitigate the associated risks, a comprehensive review of the project claims stated in the VCS Joint project description & monitoring report (referenced as B01) were conducted. This review helped in assessing the claims against VCS requirements to ensure compliance and accuracy. The Verification Team has performed a detailed assessment of baseline delineation as per the requirements of methodology and registered Joint PD & MR in the latter part of this report i.e., section 3.4. Furthermore, background documents such as the monitoring survey report/05/, which includes country-specific non-renewable biomass (f_{NRB}) studies, were cross-checked with project-specific evidence from the host country/region. This process

				helped verify the claims made in the project documentation. Additionally, interviews with relevant stakeholders (referenced as /10/) were conducted to gather insights and perspectives from those involved in or impacted by the project. These interviews help provided valuable information to further assess the validity of the claims and ensure a comprehensive understanding of the project's performance. Regarding leakage, the default value of 0.95, as outlined in the specified methodology/B07/, considered. This default value accounts for any potential leakage and ensures accurate calculations and assessments. By undertaking these measures, the project can effectively mitigate risks, enhance transparency, and ensure the reliability and credibility of the reported claims.
3.	Accuracy of the monitoring survey	Medium	Inadequately delineated monitoring plan may lead non-compliance	To mitigate the risk associated with the accuracy of the monitoring plan, several measures were taken. These include: 1. Reviewing the monitoring survey report /05/ and the VCS Joint project description & monitoring report/B01/ This review will assess the alignment of the monitoring plan

				with the reported data and claims, ensuring consistency and accuracy. 2. Ensuring compliance with VCS requirements. The monitoring plan was evaluated to ensure it meets the standards and guidelines set by VCS. 3. Assessing the sampling tool applied. The appropriateness and effectiveness of the sampling methodology used in the monitoring plan was examined to ensure reliable and representative data collection. 4. Conducting remote interviews with the Project Proponent (PP), their associates, and end-users. These interviews provided an opportunity to verify the feasibility and appropriateness of the monitoring plan. Feedback from stakeholders involved in the project helped validate the accuracy of the data collected and the effectiveness of the monitoring procedures. By implementing these measures, the project can mitigate the risk associated with the accuracy of
--	--	--	--	--

				the monitoring plan and ensure that the reported data and claims are reliable and consistent with the established guidelines and requirements.
4.	Competence of personnel involved in conducting monitoring like surveys	Medium	Interview of the personnel involved and check the training records conducting such monitoring.	To mitigate the risk associated with monitoring surveys, the following steps were taken: 1. Reviewing the training records (referenced as /24/) of the personnel responsible for conducting the surveys. This review ensured that the individuals involved in the monitoring process have received appropriate training and possess the necessary skills and knowledge to carry out accurate and reliable surveys. 2. Following the defined monitoring responsibilities. The roles and responsibilities of the monitoring team be clearly defined and adhered to throughout the survey process. This includes ensuring that all required data is collected, recorded, and analysed in a consistent and systematic manner. 3. Verifying the training records during interviews with relevant stakeholders. By

				conducting interviews, the validity of the training records was confirmed, and any discrepancies or concerns can be addressed. By conducting a thorough review of the training records/24/ Nand verifying them through interviews, the project can mitigate the risk associated with monitoring surveys. This approach ensures that trained personnel are involved in the survey process and that they follow the established monitoring responsibilities, thereby enhancing the reliability and accuracy of the collected data.
--	--	--	--	--

Sampling Plan:

Due to a large number of project activity instances in Uganda, it is impractical to assess each one individually. To overcome this, the verification team used appropriate sampling methods for assessment. These methods are carefully selected to ensure statistical validity and reliability. The team documents and explains the chosen sampling methods in detail, providing transparency and clarity about the verification process. The number of instances included in the project, eligible for monitoring, and the generation of Verified Carbon Units (VCUs) is determined proportionally based on the compliance rate observed among the sampled instances. This approach allows for a representative assessment of the project activity while maintaining efficiency and accuracy in the verification process.

☐	No sampling approach has been used by the VVB to verify the project's compliance with SD Vista requirements.
☒	A sampling approach has been applied by the VVB to verify the project's compliance with VCS requirements for the aspects derived in step 2 above. The statistical approach of sample size (i.e., 8) calculation is provided below.

AS: Acceptance Sampling

Assessment team has applied a random sampling approach for the remote inspection as part of assessment in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 9.0 /B10/. In accordance with the paragraph 26 of the sampling standard, acceptance sampling has been chosen by the assessment team. Embracing the principles of precision and reliability, the team has consciously opted for acceptance sampling, a well-established technique that facilitates a systematic and representative sampling of project instances. By attentively adhering to these sampling guidelines, VKU's Assessment Team ensures a robust, accurate, and comprehensive assessment of the project activities. thereby upholding the highest standards of evaluation.

From the PP's sampling survey sheet, assessment team has opted for **AQL of 0.5 %**¹ and **UQL of 20%; producer risk of 10% and consumer risk of 20%** as per VVBs professional judgement² based on CDM Guideline para 39 (c), which is "if the VPA/CPA is located in a least developed country, then greater producer/consumer risk (maximum allowed is 20%) will be applied". the producer risk chosen by VVB is 10% and consumer risk is 20%. It is in line with the standard requirement as per according to **para 30** and **para 31** of Standard: Sampling and surveys for CDM project activities and programme of activities version 9.0 /B10/ since Republic of Uganda is a least Developed Country³.

As per CDM guidance on sampling as per Para 39 (c), the producer risk chosen by VVB is 10% and consumer risk is 20%. Uganda is a Least Developed Country and hence greater producer/consumer risk (maximum allowed-20%) can be applied. So, as per VVB's professional

¹ As per Uganda is least developing country, pervious Joint validation and verification, and also as per the survey report which 100% cookstove is operational and audit is remote, VVB take consumer risk high (AQL 05% and consumer risk 20%) and this is conservative approach because it allows for only a very small percentage of defects to be present in the sample (82) without rejecting the entire lot.

² Professional Judgement based on previous Joint Validation and Verification/B02/, [World Bank LDC Country list](#) and [UNDP Poverty data](#)

³ <https://unctad.org/topic/least-developed-countries/list>

judgement according to para 30, para 31 and para 39 of Sampling and surveys for CDM project activities and programme of activities version 09.0 in determining the VVB's selected sample size of= 8 (serial number of Cookstove) with acceptance number is 00 randomly as per with VKU's internal procedures i.e., VKU.F74A.Sampling Plan Method and Guidance/23/ and found it in line with CDM Sampling standard/B09/.

Sample size and acceptance number based on AQL, UQL, and producer and consumer risks as per Sampling and Survey Standard v09.0

Producer Risk		5%		5%		5%		5%	
Consumer Risk		5%		10%		15%		20%	
AQ L	UQ L	Sampl e Size (n)	Acceptanc e Number (c)	Sampl e Size (n)	Acceptanc e Number (c)	Sampl e Size (n)	Acceptanc e Number (c)	Sampl e Size (n)	Acceptanc e Number (c)
0.5 %	10 %	46	1	38	1	33	1	29	1
0.5 %	15 %	30	1	25	1	22	1	10	0
0.5 %	20 %	22	1	18	1	9	0	8	0
1.0 %	10 %	61	2	52	2	33	1	29	1
1.0 %	15 %	30	1	25	1	22	1	19	1
1.0 %	20 %	22	1	18	1	16	1	14	1
Producer Risk		10%		10%		10%		10%	
Consumer Risk		5%		10%		15%		20%	

AQ L	UQ L	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)	Sample Size (n)	Acceptance Number (c)
0.5 %	10 %	46	1	38	1	19	0	16	0
0.5 %	15 %	19	0	15	0	12	0	10	0
0.5 %	20 %	14	0	11	0	9	0	8	0
1.0 %	10 %	46	1	38	1	33	1	29	1
1.0 %	15 %	30	1	25	1	22	1	10	0
1.0 %	20 %	22	1	18	1	9	0	8	0

Details of random sampling (acceptance) done by VVB which is selected through online random sample generator (<https://epitools.ausvet.com.au/randomnumbers>). VVB samples represent the population of the grouped project activity as PP samples represent their entire population as per the CDM sampling standard and guidelines/B09/and /B10/.

STOVE MODEL	PP Sample	VVB Sample
KUNIOKOA	14	3
JIKOKOA	32	3
MASUPA	36	2

Total	82	8
-------	----	---

The stoves details (unique serial number, date of installation, type of ICS, name of user and address) were checked and found to be consistent with that reported in the installation database/08/. No inconsistency was observed for any of the 08 random end-users (represented as samples) which represent the samples of PP with respect to remote audit & document review. This assessment of the selected samples was done to ascertain the implementation status of the project activity w.r.t. the stove types, serial number, location, operation etc. of ICS.

2.5 Resolution of Findings

The aim of this phase of verification is to address any outstanding issue that require clarification to ensure a positive conclusion from VKU regarding the joint project description and monitoring report. To ensure transparency, a customized verification protocol has been developed specifically for the project. This protocol transparently outlines the requirements, methods of verification, and the outcomes of verifying the identified criteria. The verification protocol consists of three situations in tables; the different columns in these tables are described below.

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during previous assessment i.e., in validation or verification report to be cross verified during verification have not been resolved by the project participants.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

A forward action request (FAR) is also raised in cases where any required deviation/information is not fulfilled in current verification and thus needs to be taken up in consequent verification for better transparency thus holding the applicability of the methodology eligible to the project activity and there is no impact of the same on additionality, baseline scenario & emission reduction calculation of project.

Keeping in line with the Clauses 4.1.21 of the VCS Standard Version 4.6, Assessment team has documented a summary of findings that include, **00 FARs, 06 CLs and 03 CARs** were raised during this verification which were closed successfully and details are provided under Appendix 04 of this report.

2.5.1 Forward Action Requests

Based on the review of the previous Joint VCS Validation/Verification Report, VVB hereby confirms that no FAR was raised which needs to be closed during this verification and no FAR has been raised during current verification, (01-August-2022 to 31-December-2023; Inclusive of both start and end dates).

2.6 Eligibility for Validation Activities

VKU has not undertaken any validation activities as part of the verification. Hence this section is not applicable. It is also to further conclude that during current verification there is no validation assessment undertaken either by VKU itself or parallelly by other certification bodies, as the same was confirmed with focussed group discussions and interview with the PP /10/.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

Verification team confirmed that there is no methodology deviation identified or requested by PP during the current monitoring period from **01-August-2022 to 31-December-2023** (Inclusive of both start and end dates) as per the remote audit conducted on **08-March-2024 and 09-March-2024**.

Deviation 01: However, deviation with respect to the surveys approach chosen for determining the efficiency of the baseline charcoal cookstoves, was accepted by the VERRA. It was possible to conduct survey before the project implementation due to the peak COVID-19 scenario, hence PP undertook the baseline survey along-with the first monitoring survey. This approved deviation during joint validation and verification does not impact the current verification as it is related to establishment and demonstration of baseline scenario.

Deviation 02: However, there was a deviation during joint validation and verification which was already validated and verified under its joint validation and verification report version 04 dated 06-February-2023. During the desk review, Verification Team also confirmed that PP has applied 15% efficiency of baseline cookstove for conventional charcoal stoves as per validated deviation to calculate emission reduction in the current monitoring period. No methodology deviation has been observed during the current verification by the verification team.

3.2 Project Description Deviations

During the current monitoring period, the verification team did not identify any discrepancies or deviations in the project description. Thus, no deviation has been identified that impacts the applicability of the methodology, additionality and the appropriateness of the baseline scenario. This finding is aligned with the absence of any deviations detected during the VCS Joint Validation & Verification process /B02/. Verification team further cross-verified accuracy and consistency of project description during the remote audit interview.

3.3 New Project Activity Instances in Grouped Projects

As per the VCS registered joint PD&MR version 03 dated 05-February-2023/B01/ and the monitoring report for the current monitoring period/01/, the project is a grouped project activity. Moreover, based on the review of ICS database/08/ and interview with project representative/10/ during remote audit, assessment team confirms that **no new instance** of project activity has been added in the current verification as the ICSs distributed on the mentioned day (24-12-2023) are of the same Jikokoa model and are distributed in Kampala and Wakiso, districts in Uganda, same as mentioned in the joint PD&MR/B01/. Thus, this is not considered as a new project activity instance as per VCS Standard v4.6/B03/.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

VKU's assessment team conducted the second verification of this grouped project for the current monitoring period from 01-August-2022 to 31-December-2023, including both the dates/01/. Based on the remote audit of the project and desk review of the project description and submitted documents & evidences, assessment team confirms that there is not baseline reassessment during this monitoring period.

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:				
Audit history					
	Audit type	Period	Program	Validation/ verification body name	Number of years
	Validation & Verification	02-January-2021 to 31-July-2022	VCS	4K Earth Science Private Limited (4KES)	01 year 06 months, 29 Days
	Verification	01-August-2022 to 31-December-2023	VCS	VKU Certification Private Limited	01 year 04 months and 30 Days
	Total	02-January-2021 to 31-December-2023	VCS		02 year 10 months 59 Days
Evidence gathering activities: Keeping in line with the requirements stated in ISO 14064-3: 2019 (E) section 6.1.3 & program requirement, the assessment team has performed the desk-review during the pre-engagement stage to confirm the duration of the current monitoring period, the last monitoring period & the crediting period of this project activity. Apart from the desk-review the VVB also confirmed the audit history while performing the personnel interview & focussed grouped discussion with PP during remote audit.					

	Evidence Checked: While contracting VKU to perform this verification, the PP shared the details for the project activity including the audit history i.e., (Details of crediting period, monitoring period & number of verification) thus initially itself VKU confirmed the audit history by cross-checking with the Joint Project Description & Monitoring Report/B01/ & Joint Validation/Verification Report/B02/ already approved by Verra and are accessible to the VVB on Verra's webpage. VVB's Conclusion: VVB would like to conclude that the above stated activities performed and evidences collected to confirm the audit history is in-line with the ISO 14064-03 /B12/& VCS standard version 4.6 requirements which is deemed accurate and satisfactory to VKU's assessment team.
Double counting and participation under other GHG programs	Project's GHG Program Status, Cross-Verification of GHG Benefits & Rejection by other GHG programs: The project has not applied under any other GHG program except VCS for current monitoring period, 01-August-2022 to 31-December-2023 (Inclusive of both dates). The project is registered under VCS only with project ID 3045. This was confirmed by checking VERRA registry website and similar exercise was performed for CDM/GS/GCC/UCR registries with similar project title/capacity and Project Proponents but the assessment team was not able to trace any such project registered under any of the above stated registries or under any other similar mechanisms. Similarly, an exercise of independently searching for such project registration or claim for current monitoring period was performed for other GHG related benefits & based on both independent assessment and declaration submitted by PP/06/, the assessment team accepted the claim that there is no double counting from this project activity for current monitoring period. The Project is not rejected by other GHG programs. A declaration/06/ for the same is checked and found correct by the assessment team. The assessment team has also cross-checked the issuance records available on the Verra website and thus confirmed & ensured that the emission reduction generated from the project activity are not & will not be double counted hence accepted by the assessment team.

No double claiming with emissions trading programs or binding emission limits	The project is not included in an emissions trading program or any other mechanism that includes GHG allowance trading. Verification through Declaration: The PP declares through the declaration /06/ that Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits any specific monitoring period under two mechanisms.
No double claiming with other forms of environmental credit	The project has not sought or received another form of GHG-related environmental credit. Issuance Records Confirmation: The assessment team has also cross-checked the issuance records available on the Verra website and thus confirmed & ensured that the emission reduction generated from the project activity are not & will not be double counted hence accepted by the assessment team. The assessment team has also cross-checked the issuance records available on the Verra website and thus confirmed & ensured that the emission reduction generated from the project activity are not & will not be double counted hence accepted by the assessment team.
Supply chain (scope 3) emissions double claiming	VVB confirms the following: After thorough examination of the project proponent's response in Section 1.11.3 of the Monitoring Report and review of additional documentation, done by the Validation and Verification Body, which confirms that the completion of this section regarding Scope 3 emissions is accurate, complete, and technically correct. Our determination is based on the following: The provided justification in the MR is technically sound and accurately reflects the project's activities. It clearly states that the distribution activities do not alter the cookstoves' emissions footprint and that the project does not modify the product in a way that changes its emissions profile. “PERSISTENTCLIMATE INDIA PRIVATE LIMITED” the undersigned project implementer of Improved Cookstoves (ICS) distributed in the project activity " Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities (VCS 3045)", has declared the following in the declaration has provided to the VVB:

	1. Acknowledgment that the "Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities (VCS 3045)" will generate Verified Carbon Units (VCUs) representing emission reductions or removals achieved through the project activity. 2. Confirmation that PersistentClimate India Pvt Ltd will not report any of the emission reductions or removals represented by the VCUs generated from this project in their Scope 3 emission statements. Based on the review, the assessment team confirms that the declaration/06/ provided by 'PERSISTENTCLIMATE INDIA PRIVATE LIMITED' aligns with the requirements and guidelines of the project activity and the Verified Carbon Standard (VCS)."
Sustainable development contributions	As per the VCS Standard Version 4.6 and updated version 4.6 of Appendix 03: Document History and Effective dates, For V4.2, serial number 04 states that "it is required by project proponents to demonstrate contributions to a minimum of three SDGs in all monitoring reports verified after the effective date. Effective immediately for all projects that request registration on or after 20-January-2023. Projects that request registration before 20-January-2023 shall demonstrate contributions to at least three SDGs by 20- January-2025". This is project's second periodic verification of first crediting period for the Monitoring Period 01-August-2022 to 31-December-2023 (Inclusive of both start and end dates), Since this project is registered before 20-January-2023, so the Project Proponent (PP) must demonstrate contributions to at least three SDGs by 20-January-2025. For the current monitoring period, the PP is voluntarily showing contributions to 05 SDGs, as indicated below: SDG Target: 3.9.1; Mortality rate attributed to household and ambient air pollution: The efficient cook stove leads to a reduction in fuel consumption and as a consequence to an improvement in indoor air quality. This has positive impacts on decreasing in health-related issues like respiratory problems, eye and throat irritations. Assessment team cross- checked SDG impact by the monitoring survey report/05/ which includes question related to the SDG 3 The change in the smoke level, incidence of coughing, incidence of difficulty in breathing and incidence of itchy eyes due to

replacement of the conventional stoves by the use ICSs. The percentage of change in these parameters are also included in the monitoring survey forms.

As per the monitoring survey results, reduction of 100% smoke was monitored which has resulted in 100% reduction in incidence of itchy eyes among the ICSs end users.

As the result the households confirming less smoke by the improved stove usage which results improvement in air quality. Hence, Assessment team confirm that the SDG indicator is correct and applicable for the current monitoring period.

SDG Target: 5.4.1; Proportion of time spent on unpaid domestic and care work, by sex, age and location: As Women and girls perform the majority of unpaid domestic work. This leaves them with less time to rest, study and realise their economic potential, leaving them in time poverty. In regards to time, women are poorer than men as unpaid domestic duties, such as collecting firewood, must be added to their market productive work, making time much scarcer. Women are widely recognized as being principally responsible for natural resource collection. The assessment team confirmed the above claimed SDG from the monitoring survey report/05/ and interviews conducted during the remote audit of the project. Hence, Assessment team confirm that the SDG indicator is correct and applicable for the current monitoring period.

SDG Target 7.3.1; Energy intensity measured in terms of primary energy and GDP: For this project, the baseline scenario is the number of households using traditional cook stoves. This project increases the adoption rate of efficient cookstoves and the outcome of SDG 7 will be measured by the number of efficient cookstoves distributed during the project. The assessment team confirmed the above claimed SDG from the project implementation database/08/. Hence, Assessment team confirm that the SDG indicator is correct and applicable for the current monitoring period.

	SDG Target 8.1.1: Annual growth rate of real GDP per capita; The implementation of ICS cookstove dissemination project activity has contributed in the annual growth rate of real GDP for which the survey will be undertaken to arrive the figure of monetary saving after implementing energy efficient stove. The assessment team confirmed the above claimed SDG during the remote audit by interviewing the end users/10/ and as a result end users confirmed that the use of ICS saved their time and energy and money by 50% or more than that which is helping them in their growth. Hence, Assessment team confirm that the SDG indicator is correct and applicable for the current monitoring period. SDG Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning; The implementation of ICS cookstove dissemination project activity leads to an emission reduction of 453,602 tCO₂e in current monitoring period which is 01-August-2022 to 31-December-2023, including both start and end dates. Assessment team evaluated the calculation of the emission reduction for this monitoring period in the ER/02/ & also evaluated the application of correct applied methodology and formulae for the project activity. Hence, Assessment team confirm that the SDG indicator is correct and applicable for the current monitoring period.
Additional information relevant to the project	The assessment team confirms that as per information provided in the monitoring report submitted by the PP to the VVB of no commercially sensitive information has been excluded from the public versions of project documents & thus conforms with the VCS Program requirements on what may be excluded. The information was cross-checked by interviewing the PP representative during the personal interviews.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

There has been no change in the stakeholder's make up since validation. Hence, as per the filling guideline of VCS verification report v4.3 "(Where the stakeholder makeup has changed since validation, use the table below to describe i) the evidence gathering activities for each item, ii) the evidence checked, and iii) the conclusion of the assessment of the project's conformance with the relevant VCS Program requirements. Where the rows do not apply, provide justification in the conclusion column." The below table is not applicable for the current monitoring period.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	There has been no change in the stakeholder's make up since validation
Legal or customary tenure/access rights	There has been no change in the stakeholder's make up since validation
Stakeholder diversity and changes over time	There has been no change in the stakeholder's make up since validation
Expected changes in well-being	There has been no change in the stakeholder's make up since validation
Location of stakeholders	There has been no change in the stakeholder's make up since validation
Location of resources	There has been no change in the stakeholder's make up since validation

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
------	--

Ongoing consultation

The process of registering complaint is as mentioned below as per the MR/01/:

1. They can call the customer care number provided by PP to register their complaints.
2. They can get in touch with a distribution channel partner's well-trained representative, who is often located near their communities, to record their complaint.
3. Also, End user can contact field officers when they visit beneficiaries to lodge any complaints, who will then share the complaint with distribution partners.

The stakeholders are encouraged to provide ongoing feedback/grievance as part of continuous ongoing stakeholder communication. The stakeholders are communicated through the house visits. At the time of monitoring survey also, field staff recorded the feedback from the local stakeholders. And also, a register is placed at the office of distribution partners.

VVB confirmed that all the above information is correct as per the interview with end users during remote audit and also found it in compliance with the registered ongoing communication details in registered joint PD&MR, Section 2.2 (which states "The stakeholders shall be communicated through the house visits"), related to ongoing communication. Joint PD&MR set the provision to ascertain the process of receiving any feedback by the stakeholders including end users using online (telephonic and email) mode or through grievance register placed at office of project distribution partner for any complaints and/or grievances. With regards to the statement in the Joint PD&MR "communicating the stakeholders via house visit" was observed to meant to receive direct feedback about project devices related any feedback/grievance to improve the quality and services during the lifetime of the project to implement further efficient practices in order to progressive inclusion of the instances and maintenance of the existing instance effectively.

VVB also confirmed that the stakeholders and end users are well aware of the contact information of the responsible person in case of any difficulty faced with ICS use.

Based on the remote interviews with end users, and the compliance of ongoing communication with registered PD, VVB confirms that the information provided in MR/01/ is accurate and acceptable.

Date(s) of stakeholder consultation	06-June -2022 (at time of validation). Verification Team confirmed that this information is correct during the desk review, as per the registered VCS joint PD & MR and also other submitted evidences.
Communication of monitored results	The monitoring results are communicated from the distributors to the end users through the house visit by distributor's representatives. The same has been confirmed in interview with the stakeholders during remote audit.
Consultation records	Verification Team confirmed that the Grievance register is placed at the office of distribution partner. The same has been verified at time of remote audit and PP also submitted the pictures of grievance register as evidences. All grievances registered on phone calls, messages, representative of distribution partner noted those in grievance register. But for the current monitoring period no grievances were received as per the records. The assessment team confirmed this based on the response from the end-users and also from the PP during the remote audit.
Stakeholder input	The minutes of the meeting were recorded by the project participant. There are no updates to the project design. There has been no grievance received for the current monitoring period. There has been no complaints/replacements request received by end-users during the verification period.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	A default distribution agreement for end users including the provision that emission reductions generated by the stove are owned by the project proponent is provided for the project instance. Evidence Gathering Activity: Remote Audit Desk Review Evidence Checked: Samples of End User agreement cum carbon waiver agreement which is signed by the end users for free/subsidised

	given improved cookstove without expiration and which does not require a future additional permission. Assessment Conclusion: Verification Team found that emission reductions generated by the stove are owned by the project proponent is provided for the project instance and in compliance with the registered joint PD&MR and VCS Standard v4.6 para 3.18.8.
Outcome of FPIC discussion	The project devices (project cook stoves) are installed in the households of these beneficiaries on their own will and PP is having transparent agreements with these concerned. Thus, it can be said that the project has not encroached on land, relocated people without consent, and forced physical or economic displacement. Waiver of carbon credits from the end users is submitted to the VVB for this instance.

4.2.4 Grievance Redress Procedure

No grievances were received during the current monitoring period.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	There have been no grievances recorded for the current monitoring period. Evidence Gathering Activity: Remote Audit and Desk review Evidence Checked: Grievance Register Assessment Conclusion: As per the remote audit and submitted grievance register, it is concluded that there are no grievances recorded for the current monitoring
Grievance redress procedure	The stakeholders are encouraged to provide ongoing feedback/grievance as part of continuous ongoing stakeholder communication. The stakeholders communicated during the house visits. At the time of monitoring survey also, field staff recorded the feedback from the local stakeholders. And also, a register is placed at the office of distribution partners. The stakeholders and end users are well aware of where to contact in case their cookstoves do not work or they face difficulties operating

	them. They have the contact number and address of the responsible person for grievance redressal. However, as of the latest monitoring survey, no end user or stakeholder has made a call to register any grievances. Evidence gathering activity: remote audit and desk review Evidence checked: Grievance records and Interview with end users and cross verified with registered joint PD &MR/B01/. Assessment conclusion: It is concluded that the grievance redress procedure is as per the registered PD&MR/B01/ and deemed to be transparent as per remote audit.
--	---

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comments received during the stakeholder consultation and the 30 days listing period.	NA.	As this is 2 nd verification, it is concluded that para 4.1.5, 4.1.6, 4.1.7 are not applicable for the current monitoring period for the given project activity.

4.2.6 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	Evidence Gathering Activity: Remote Audit and Desk Review Evidence Checked: Survey Records and cross verification with registered Joint PD & MR/B01/ Assessment conclusion: As per the survey records provided by PP and registered VCS Joint PD & MR/B01/, it is concluded that there is no risk

	to local stakeholders in terms of their participation or engagement during project activity.
Working conditions	Evidence Gathering Activity: Remote Audit and Desk Review Evidence Checked: Grievance records, interview with local stakeholders and cross verified with registered VCS Joint PD & MR/B01/. Assessment conclusion: as per the grievance register submitted by PP and remote interview with local stakeholders, is it concluded that there is no risk associated with the working conditions during the operation of project activity.
Safety of women and girls	Evidence Gathering Activity: Remote Audit and Desk Review Evidence Checked: survey records, remote interview and registered VCS Joint PD & MR/B01/. Assessment conclusion: As per the survey records and remote interviews with end-users and local stakeholders, it is concluded that due to improved cookstoves, the wood consumption has reduced and it has lessened the trips of women and girls for wood collection. Hence the risk of women safety has been mitigated by the project.
Safety of minority and marginalized groups, including children	Evidence Gathering Activity: Remote Audit Desk Review Evidence Checked: survey records, remote interview and registered VCS Joint PD & MR/B01/. Assessment conclusion: it is concluded by assessment team that as per the survey records and remote interviews the project has no potential risk associated with the safety of children, minority and marginalized groups. The same has been cross verified with registered VCS Joint pd & MR/B01/.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	Evidence Gathering Activity: Remote Audit Desk Review Evidence Checked: Manufacturer specification, Survey records, remote interview and registered VCS Joint PD & MR. Assessment conclusion: As per the survey records and efficiency of ICS cross verified from manufacturer's specification, the project improves air quality and produces less pollutants as compared to the baseline stove. This is also cross verified from interviews with end users and registered VCS Joint PD & MR. hence, it is concluded that there is no risk associated with pollutant emissions caused by project activity.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	Evidence Gathering Activity: Remote Audit and Desk Review Evidence Checked: Feedback of End Users for Project Implementation Assessment conclusion: The given project is for community and people of Uganda, specifically help in improving the life of Women and People of Uganda. As per the interview taken by the verification, beneficiaries are satisfied with the distributed Improved Cookstove.
Management experience	Evidence Gathering Activity: Remote Audit and Desk Review Evidence Checked: NA Assessment conclusion: NA
Gender equity in labor and work	Evidence Gathering Activity: Remote Audit and Desk Review Evidence Checked: Remote interviews and registered VCS Joint PD & MR Assessment conclusion: As per the observation verification team concluded that Equal opportunities have been provided in the context of gender equity and pay for labor and work. The same has been verified through the employment record and company composition list (based on gender)/25/.
Human trafficking, forced labor, and child labor	Evidence Gathering Activity: Remote Audit and Desk Review Evidence checked: Registered Joint PD&MR/B01/ https://www.angaza.com/2021/12/10/how-ezylife-uganda-used-angaza-to-increase-cookstove-sales-by-190/ and https://www.persistentclimate.com/projects.php

Assessment conclusion: Project has positive impact on the life of beneficiaries as per the survey report and remote audit observation. Hence, it is concluded that there is no Human Trafficking, forced labor, and child labor.

4.2.7.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	Evidence Gathering Activities: Remote Audit and Desk Review of MR (section 2.3.2) Evidence Checked: Observation, and Grievance Register for current monitoring period and registered joint PD&MR/B01/ Assessment Conclusion: It is concluded that project activity has significantly reduced Indoor/Household Air Pollution (HAP) in the households due to reduced exposure to PM and/other emissions (SDG 3.9.1). Reduction in the risk of mortality among infants and children under five years of age due to (1) acute lower respiratory illnesses (ALRI), such as pneumonia and bronchitis, the cause of mortality in 12% of children under five, and (2) burns resulting from children falling into open cooking fires. (SDG 3.2.1, 3.2.2) and risk of fire due to open and shoot production in inefficient cooking ways. The details about the workers are recorded in order to-ensure that the International Labor Organization, as well as national labor laws, are respected and that no child labour, as defined by the ILO Minimum Age Convention, is involved in the project. The project also resulted in burden on women due to the reduced need to collect fuel for cooking.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	Evidence gathering activities: Remote Audit and Desk Review of Monitoring Report Evidence Checked: Cross verified the location where Improved Cookstove were distributed, during the remote audit.

Assessment Conclusion: It is concluded that the given project activity do not involve the Indigenous People and any cultural Heritage.

Since, the project activity involves the production and distribution of cook stoves, entirely manufactured outside the beneficiary's land, hence, no tangible cultural heritage has been hampered for the project activity. Also, there has been no negative impacts of the project activity on the non-tangible cultural heritage of the stakeholders, instead it fosters cultural harmony by involving diverse groups, without affecting their customs, traditions or beliefs. Hence, the project continues to preserve and protect cultural heritage as part of their project activity.

4.2.7.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Disputes over rights to territories and resources	As per the remote audit and desk review, verification team found that No disputes over territories or resources occurred during the current monitoring period as the given project activity is distribution of improved cookstove so, it is concluded that 1. The project shall not encroach on private, stakeholder, or government property or relocate people off their lands without prior consent and appropriate compensation. 2. The project shall not lead to forced physical or economic displacement. Hence, this section is not applicable
Respect for property rights	Evidence gathering activities: Remote Audit and Desk review Evidence checked: Interview with End Users and registered Joint PD&MR/B01/ Assessment Conclusion: No property rights are violated due to this project activity. This project activity involves the production and distribution of cook stoves, which has entirely been manufactured outside the beneficiary's land. Hence, no land/property of the stakeholders, IPs, LCs, and customary rights holders has been incorporated. Additionally, the project activity has obtained the free, prior and informed consent of the end users (beneficiaries including the IPs, LCs, and customary rights

holders). This ensures that their lands are property rights are protected and respected.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	Evidence Gathering Activities: Remote Audit and Desk Review Evidence Checked: Carbon Wavier Agreement Assessment Conclusion: It is confirmed that the implemented project is the distribution of improved Cookstoves (ICS) among households and communities in Uganda with the objective to displace traditional, unimproved cookstoves and open fires for cooking. The PP ensures that the implemented project does not encroach on private, stakeholder, or government property or relocate people off their lands without prior consent and appropriate compensation. The project does not lead to forced physical or economic displacement. Thus, Verification Team confirmed that the this is consistent with clause 3.19.22 of VCS Standard version 4.6, this is not applicable since this project does not impact property rights, usage or resources.
Benefit sharing during the monitoring period	Verification Team confirmed that the project does not impact property rights, usage or resources. Hence this is not applicable.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No risk identified Evidence gathering activities: Desk-review of registered PD, Personal interview & focussed grouped discussion.

		Evidence checked: Registered Joint PD&MR/B01/ and its corresponding Joint validation and verification report/B02/ Assessment Conclusion: This project activity is characterized by its positive impact on biodiversity and the ecosystem. By reducing deforestation caused by traditional fuel gathering practices, the project helps preserve local flora and fauna. Additionally, the promotion of improved cook stoves leads to more efficient use of resources, further benefiting the environment. Overall, the project contributes to the conservation of biodiversity and the enhancement of the local ecosystem.
Soil degradation and soil erosion	No risk identified	Evidence gathering activities: Desk-review of registered PD, Personal interview & focussed grouped discussion. Evidence checked: Registered Joint PD&MR/B01/ and its corresponding Joint validation and verification report/B02/ Assessment Conclusion: No Soil Degradation and soil erosion due to the given project activity.
Water consumption and stress	No risk identified	Evidence gathering activities: Desk-review of registered PD, Personal interview & focussed grouped discussion. Evidence checked: Registered Joint PD&MR/B01/ and its corresponding Joint validation and verification report/B02/ Assessment Conclusion: There is no water consumption and stress due to the given project activity. .
Usage of fertilizers	No risk identified	Evidence gathering activities: Desk-review of registered PD, Personal interview & focussed grouped discussion. Evidence checked: Registered Joint PD&MR/B01/ and its corresponding Joint validation and verification report/B02/ Assessment Conclusion: There is no usage of fertilizers in the project activity.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
------	--

Species or habitat	Evidence gathering activities: Remote Audit and Desk Review Evidence checked: Not Applicable Assessment Conclusion: The given project is distribution of improved cookstove which falls under sub sectoral scope 3.1. therefore, not include planting and introduction of species. Hence, it is concluded that is section is not applicable as per para 3.19.27 of VCS Standard v4.6 for the given project activity.
--------------------	--

4.2.8.2 Introduction of Species

The given project activity involves distribution of Improved Cookstove, verification team confirmed that there is no involvement of Introduction of species. Hence, below tables are not applicable.

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	N/A

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	N/A

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	Evidence gathering activities: Remote Audit and Desk Review Evidence checked: Not Applicable Assessment Conclusion: Since the project activity is not an Afforestation and Reforestation (ARR) project, Agroforestry and Agro-silvopastoral Systems (ALM) project, Wetland Restoration and Conservation (WRC) project, nor an Avoided Conversion of Grasslands and Shrublands (ACOGS)

project, the information related to these specific project types is not applicable. This means that the project does not fall under any of these categories and therefore does not need to be evaluated based on the criteria specific to these types of projects.

4.3 Accuracy of Reduction and Removal Calculations

The equations and choices provided /B07/ and all other methodological tools are correctly quoted in the MR /01/. The emission reductions of the project activity are calculated using the formulae mentioned in the applied methodologies; VMR0006 version 1.1 /B07/. The verification team has reviewed the emission reduction spread sheet (ER sheets /02/ and checked all the formulae and found they are correct and are in accordance with the monitoring plan of the Joint PD & MR /B01/ and the applied monitoring methodology /B07/. The appropriateness of default values used in the monitoring report is elaborated below:

Table No. 10 Data and parameters Available at the time of validation or Ex-Ante parameters

S. No	Data/parameters	Unit	Value applied	Assessment
1	B_{old} (Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices.	Tonnes/year	4.38 tonnes wood-eq/HH-yr (For Firewood baseline) 6.023 Tonnes/HH (For charcoal baseline)	Assessment team hereby confirms that the value has been determined based on the UN data for household fuelwood and charcoal consumption. It is consistent with registered Joint PD&MR/B01/.
2	$NCV_{woodfuel}$ Net calorific value of the non-renewable woody biomass that is substituted or reduced	TJ/tonne	0.0156	It is IPCC default value verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories;

				Volume 2 Energy, Chapter 1 Introduction. Further, this is a default value as stated in the VMR0006 Methodology, version 1.1/B01/and also consistent with joint PD&MR/B01/.
3	EF_{wf,CO2} CO₂ emission factor for the use of wood fuel in baseline scenario	tCO ₂ /TJ	112	It is an IPCC default value verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary combustion. The value is fixed as per registered Joint PD & MR version 03.0 dated 05-February-2023/B01/ for the entire crediting period.
4	EF_{wf,non CO2} The non-CO₂ emission factor for the use of wood fuel in baseline scenario	tCO _{2e} /TJ	26.23	It is an IPCC default value verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories;

				Volume 2 Energy, Chapter 2 Stationary combustion. The value is fixed as per registered Joint PD & MR version 03.0 dated 05-February-2023/B01/ for the entire crediting period.						
5	$f_{NRB,y}$ Fraction of non-renewable biomass saved by the project activity	Fraction	0.9790	It is consistent with registered Joint PD&MR/B01/.						
6	η_{old} Efficiency of baseline cookstove	Fraction	0.1 (For firewood stoves) 0.15 (For convectional charcoal stoves)	It is consistent with registered Joint PD&MR/B01/.						
7	η_p Efficiency of project stove at the start of project activity	Fraction	<table><tr><td>Burn Jikokoa Model</td><td>Masupa Model</td><td>Kuniokoa Model</td></tr><tr><td>0.537</td><td>0.382</td><td>0.424</td></tr></table>	Burn Jikokoa Model	Masupa Model	Kuniokoa Model	0.537	0.382	0.424	It is consistent with registered Joint PD&MR/B01/.
Burn Jikokoa Model	Masupa Model	Kuniokoa Model								
0.537	0.382	0.424								
8	Life span The operating lifetime of the project device. The life span should be reported if the methodology equation 5 is adopted to determine the project stove efficiency	Years	7	It is consistent with registered Joint PD&MR/B01/.						

Methods and formulae set out in the project description for calculating actual emissions for current monitoring period.

According to applied methodology VMR0006 (version 1.1) /B07/ the emissions are calculated as below:

Baseline Emission:

$$ER_y = \sum_i \sum_j ER_{y,i,j} \quad \text{Equation(1)}$$

- i = Indices for the situation where more than one type/model of improved cookstove is introduced to replace three-stone fire
- j = Indices for the situation where there is more than one batch of improved cookstove of type i
- ER_y = Emission reductions during year y in t CO₂e
- $ER_{y,i,j}$ = Emission reductions by improved cookstove of type i and batch j during year y in t CO₂e

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times f_{NRB,y} \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95$$

Equation 2:

- $B_{y,savings,i,j}$ = Quantity of woody biomass that is saved in tonnes per improved cookstove of type i and batch j during year y
- $f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass (f_{NRB})
- $NCV_{wood\ fuel}$ = Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne)⁴
- EF_{wf,CO_2} = CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO₂/TJ)⁵
- $EF_{wf,non\ CO_2}$ = Non-CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO₂/TJ)⁶
- $N_{y,i,j}$ = Number of improved cookstoves of type i and batch j operating during year y
- 0.95 = Discount factor to account for leakage

⁴ 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 1 Introduction

⁵ 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion

⁶ 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion

To calculate $B_{y,savings}$, we use Option 1 of the applied methodology⁷

$$B_{y,savings,i,j} = B_{old} \times \left(1 - \frac{\eta_{old}}{\eta_{new,i,j}}\right) \text{ Equation (3)}$$

Where:

B_{old} Quantity of wood fuel used in the absence of the project activity in tonnes

η_{old} A default value of 0.10 may be optionally used if the replaced system is a three stone fire, or a conventional system with no improved combustion air supply or flue gas ventilation system, i.e., without a grate or a chimney.

$\eta_{new,i,j}$ Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol.

As some of the project households continue to use baseline cookstoves along with improved cookstoves, B_{old} has been adjusted ex-post based on the percentage of project households found to continue such practice according to the Equation 6 of applied methodology as follows:

$$B_{old,adjusted} = B_{old} \times (1 - \mu_y) \text{ Equation (6)}$$

$B_{old,adjusted}$ = Adjusted B_{old} to account the ex-post usage of firewood in baseline cookstove(s) by project households in addition to improved cookstove (in tonnes per device)

μ_y = Baseline stove usage factor to account for use of baseline cookstoves along with improved cookstoves.

Calculation of f_{NRB} has been undertaken by using the CDM tool 30. f_{NRB} value is 97.90%.

Since, the current monitoring period is from 01-August-2022 to 31-December-2023 (both dates included), so for the Parameter η_p (Efficiency of project stove at the start of project activity which was validated and the same values are applied for the calculation of $\eta_{new,i,j}$ for the current monitoring period. The validated values for η_p are as follows:

Burn Jikokoa Model	Masupa Model	Kuniokoa Model
0.537	0.382	0.424

⁷ Equation 3 of methodology VMR 0006

$\eta_{new,ij}$ = Verification Team confirmed that values for Efficiency of the device of each type i and batch j implemented as part of the project activity is calculated as per the Equation 5 given in the methodology: “Efficiency of the improved cookstoves to be estimated using equation 5 of applied approved methodology where loss in efficiency per year is calculated, and therefore this parameter does not need to be monitored” and found it correct.

Depreciated Efficiencies as per VMR0006	Burn Jikokoa Model	Masupa Model	Kuniokoa Model
ICS efficiency (η_p)	0.537	0.382	0.424
Year	Stove efficiency	Stove efficiency	Stove efficiency
1 (applied Efficiencies)	0.505	0.357	0.399
2 (applied Efficiencies)	0.500	0.355	0.395
3 (applied Efficiencies)	0.495	0.352	0.391

ICS model	Weighted average efficiency
Jikokoa	49.51%
Masupa	35.64%
Kuniokoa	39.07%

As assessed in this section, emission reductions for the project “Reduced Emissions from Improved and Efficient Cooking in Ugandan Communities” are being claimed for this monitoring period and the total population of the stoves for the current monitoring period i.e. 01-August-2022 to 31-December-2023 (both dates included) is 58,793 that prevented the release of 453,602tCO₂e into the atmosphere.

VB's Opinion:

VVB carefully examined the monitoring data collected during the specified period to confirm its accuracy and completeness. This scrutiny aimed to identify any potential errors, inconsistencies, or outliers that could affect the quality of the data. After confirming the accuracy of the monitoring data, the project proponent proceeded with data analysis. They used appropriate statistical

methods and techniques to process the collected data and derive meaningful insights from it. By analysing the data, they could identify trends, patterns, and any significant changes related to the emissions reductions or environmental performance of the project. Based on the results of the data analysis, the project proponent estimated the emissions reductions achieved as outlined in the monitoring report. This estimation is crucial for evaluating the project's effectiveness in reducing greenhouse gas emissions or achieving its intended environmental goal.

Hence, the verification team found it is in line with the sampling guideline and Joint PD & MR /B01/ found the sampling approach conservative and appropriate, based on the provisions of the sampling guideline and the same has been Joint PD & MR/B01/.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 1.1 /B07/, and VCS Joint PD & MR /B01/. The PP has used monitored data and ex-ante fixed data including default values as mandated/permitted by the applied methodology. The values used for the calculation of GHG emission reductions have been thoroughly checked by the verification team and was found appropriate and correct.

4.4 Quality of Evidence to Determine Reductions and Removals

When verifying the reported emission reduction, VKU ensured that there was a clear audit trail that contained the evidence and records that helped verify the stated figures. All source documents that form the basis for assumptions and other information underlying the GHG data are shown above.

When assessing the audit trails, VKU also examined:

1. whether sufficient evidence was available, both in terms of frequency and in covering the full monitoring period
2. the source and nature of the evidence
3. if comparable information was available from sources other than that used in the monitoring report/O1/, VKU cross-checked the monitoring report against the other sources to confirm that the stated figures were correct. The sources and the data referenced are shown in Section 2.2 above. All records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant, lack of evidence and missing data were detected during verification. Hence, the verification team confirms that the monitoring system ensures the required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures.

The operational status of project ICS is monitored through sample survey following UNFCCC sampling and survey guideline follows 95/10 confidence precision. 95/10 is a methodological choice which is fixed at the time of validation. The survey form/04/and photographs were checked to ascertain the monitoring results reported in the survey/05/. For enhancing the survey reliability and QA/QC, training has been provided to the data collector during survey /05/ which was further verified from the training details provided by the PP. It is also noted the achieved precision is less than 10% and hence meets the desired confidence precision level. The monitored results are found consistent with remote audit.

Monitoring Plan: As per the per remote audit, verification found that monitoring plan is as per the registered PD&MR/B01/.

Monitored Parameters:

The project involves introduction of improved cook stoves as energy efficiency measure:

S. No.	Monitoring Parameter	Description of Monitoring Parameter
1.	$N_{y,i,j}$	Number of project devices of type i and batch j operating during year y for each stove type (wood & charcoal)
2.	μ_y	Adjustment to account for any continued use of pre-project devices during the year y (for each stove type)

During the interview/10/ verification, QA/QC procedures were identified which demonstrate that: Operational and management system of the project activity is in place; data were centralized; monitoring data were crosschecked with the database/08/ stored and confirmation that all operational staff were trained before taking up positions. The verification team thus confirmed that the monitoring of the project activity has been implemented in accordance with the monitoring plan in the registered VCS Joint PD & MR/B01/. The registered VCS Joint PD & MR /B01/ clearly describes the monitoring and responsibility of monitoring is done by PP.

VKU verification team applied random acceptance sampling approach as per the CDM sampling guideline v09/B09/ and CDM Sampling standard/B10/ verified 08 random household samples (each household has 01 cookstove) with acceptance number (c) as 00. samples from the sampling survey done by project participants as per the sampling standard version 09. During the sampling survey conducted by the project participants, they followed the sampling standard version 09.

However, all of the stoves were found to be operational according to the data provided by the project participants, which is required number of samples as explained in section 2.4 above to ascertain accuracy of information. VKU confirms the project cook-stoves are operating in all samples interviewed/10/, each cook-stove has unique identification number (ID) which has been provided in the end user agreement and are consistent as per project database/08/. Along with the serial number, the stove model, end user name, address, installation date, location etc. had also been noted which were found to be consistent during remote audit/12/.

VKU verification team has assessed the baseline scenario during remote audit through interviews with end-users/10/. VKU verification team noted during the remote audit that the targeted population were using non-renewable wood fuel firewood/fossil fuels on Traditional stoves for cooking. Therefore, PP has considered the default value for n_{old} as 0.1 for firewood stoves and 0.15 for conventional charcoal in line with section 9.2 of the applied methodology VMR0006 v1.1.

It is noted that no changes have been observed or identified during the remote audit which may impact the additionality, no addition of component nor extension of technology, no addition nor removal of project sites, no change of values of the actual operational parameter relevant to determination of emission reductions which are within the control of the PP; no change has been observed or identified that may impact the scale of the project activity or applicability of baseline and monitoring methodology VMR0006 “Methodology for Installation of High Efficiency Firewood Cookstoves” version 1.1/B07/ and was found consistent with the registered Joint PD & MR/B01/.

VKU verification team confirms that all the emission sources within the project boundary have been considered appropriately. Monitoring of all parameters during the monitoring period is followed as per registered monitoring plan. The table below describes the data/parameters relevant to the monitoring plan.

Table No. 11 Data and Parameters Monitored

S n o.	Parameters	Unit	Value applied	Description/Assessment
--------------	------------	------	---------------	------------------------

1.	Number of project devices of type i and age a that are operating in year y $N_{y,i,j}$	Number	Number of Stoves Models	Unit	Count Before Discount (Refer the Installation Summary in ER Sheet)	Count after discount (Refer the C16, C 17 & C18 cells in tab "ER Calculation")	The project has commissioned total ICS i.e., 58,793 cookstove. As per the Monitoring survey report/05/ all stoves are operational. The same has been cross verified with interview of 8 end user which is selected as per the acceptance sampling and found all 8 cookstoves are functional.
			$N_{y,1}$ Masupa	Number	45,217	43,621	
			$N_{y,2}$ Burn Jikokoa	Number	13,027	12,567	
			$N_{y,3}$ Kunio koa	Number	549	530	

2	To establish the date of commissioning, the Project Participant may opt to group the devices in “batches” and the latest date of commissioning of a device within the batch are used as the date of commissioning for the entire batch. (Date of commissioning of batch j)	Date	02-January-2021			This parameter is used for calculation of emission reductions. Verification Team confirmed that 02-January-2021 is consistent with the project database/08/. Hence, all given information by PP is correct.										
3.	Adjustment to account for any continued use of pre-project devices during the year y μ_y	Fraction	<table border="1"> <tr> <td>$1-\mu_{y,1}$Masupa</td> <td>fraction</td> <td>0.980</td> </tr> <tr> <td>$1-\mu_{y,2}$BURN Jikokoa</td> <td>fraction</td> <td>1.000</td> </tr> <tr> <td>$1-\mu_{y,3}$Kuniokoa</td> <td>fraction</td> <td>1.000</td> </tr> </table>			$1-\mu_{y,1}$ Masupa	fraction	0.980	$1-\mu_{y,2}$ BURN Jikokoa	fraction	1.000	$1-\mu_{y,3}$ Kuniokoa	fraction	1.000		This parameter is calculated based on sampling survey and sample size are calculated based on the applied methodology/B07/.
$1-\mu_{y,1}$ Masupa	fraction	0.980														
$1-\mu_{y,2}$ BURN Jikokoa	fraction	1.000														
$1-\mu_{y,3}$ Kuniokoa	fraction	1.000														

							ICS monitoring survey has been done from 19-December-2023 to 30 -December-2023, as confirmed by monitoring survey report submitted by the PP.
4	Efficiency of the device of each type i and batch j implemented as part of the project activity $\eta_{new,i,j}$	Fracti on	Depreciat ed Efficiencie s as per VMR0006	Burn Jikokoa Model	Masup a Model	Kuniok oa Model	Verification Team confirmed that monitoring frequency is annual and as per the assessment of WBT Summary sheet of ER Calculation sheet/02/ the given values are deemed to be correct and in compliances. Also, compliance with registered applied methodology /B07/.
			ICS efficiency (η_p)	0.537	0.382	0.424	
			Year	Stove efficien cy	Stove efficien cy	Stove efficien cy	
			1 (applied Efficiencie s)	0.505	0.357	0.399	
			2 (applied Efficiencie s)	0.500	0.355	0.395	
			3 (applied Efficiencie s)	0.495	0.352	0.391	
			ICS model	Weighted average efficiency			
			Jikokoa	49.51%			
			Masupa	35.64%			
Kuniokoa	39.07%						

GHG Emission Reduction Calculation:

Verification Team confirmed that PP used equation 1 and 2 of the applied methodology VMR0006: 'Methodology for installation of High Efficiency Firewood Cookstoves', version 1.1/B07/. and found it correct and consistent.

$$ER_y = \sum_i \sum_j ER_{y,i,j}$$

..... Equation 01

Where,

i	=	Indices for the situation where more than one type/model of improved cookstove is introduced to replace three-stone fire
j	=	Indices for the situation where there is more than one batch of improved cookstove of type i
ER _y	=	Emission reductions during year y in t CO ₂ e
ER _{y,i,j}	=	Emission reductions by improved cookstove of type i and batch j during year y in t CO ₂ e

$$ER_{y,i,j} = B_{y,savings,i,j} \times f_{NRB,y} \times NCV_{wood\ fuel} \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95$$

..Equation 02

B _{y,savings,i,j}	=	Quantity of woody biomass that is saved in tonnes per improved cookstove of type i and batch j during year y
f _{NRB}	=	Fraction of woody biomass that can be established as non-renewable biomass (f _{NRB})
NCV _{wood fuel}	=	Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne) ⁸

⁸ 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 1 Introduction

EF _{wf, CO2}	=	CO ₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO ₂ /TJ) ⁹
EF _{wf, nonCO2}	=	Non-CO ₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO ₂ /TJ) ¹⁰
N _{y,i,j}	=	Number of improved cookstoves of type i and batch j operating during year y
0.95	=	Discount factor to account for leakage

To calculate B_{y,savings}, we use Option 1 of the applied methodology¹¹

$$B_{y,savings,i,j} = B_{old} \times \left(1 - \frac{\eta_{old}}{\eta_{new,i,j}}\right) \dots \dots \text{Equation 03}$$

Where:

B_{old} Quantity of wood fuel used in the absence of the project activity in tonnes

η_{old} A default value of 0.10 may be optionally used if the replaced system is a three stone fire, or a conventional system with no improved combustion air supply or flue gas ventilation system, i.e., without a grate or a chimney.

η_{new,i,j} Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol.

Efficiency of the improved cookstoves to be estimated using equation 5 of applied approved methodology where loss in efficiency per year is calculated:

$$\eta_{new,i,y} = \eta_p \times (DF_n)^{y-1} \times 0.94 \quad \text{Equation (5)}$$

As some of the project households continue to use baseline cookstoves along with improved cookstoves, B_{old} has been adjusted ex-post based on the percentage of project households found to continue such practice according to the Equation 6 of applied methodology as follows:

$$B_{old,adjusted} = B_{old} \times (1 - \mu_y) \quad \text{Equation (6)}$$

⁹ 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion

¹⁰ 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion

¹¹ Equation 3 of methodology VMR 0006

Where:

- $B_{old,adjusted}$ = Adjusted B_{old} to account the ex-post usage of firewood in baseline cookstove(s) by project households in addition to improved cookstove (in tonnes per device)
- μ_y = Baseline stove usage factor to account for use of baseline cookstoves along with improved cookstoves.

Calculation of f_{NRB} . Has been undertaken by using the CDM tool 30, the detailed calculation and was furnished to VVB. f_{NRB} value is 97.90%.

Verification Team confirmed that the ER calculation is correctly calculated in the ER spreadsheet and it is in compliance with the registered methodology/B07/.

Project Emission: Verification team found that as per the section 8.2 of the applied methodology VMRO006¹² v1.1, methodology does not account for project emissions separately, but instead quantifies net emission reductions achieved by the project

Leakage: Verification team found that as per the section 8.3 of the applied methodology VMRO006¹³ v1.1 Leakage is already accounted in calculation of emission reduction by adjusting with default value of 0.95.

Final calculations & formulae regarding the ER achieved during current MP is stated in section 4.4 of this report.

Period	No. of Days	Estimated emission reduction (tCO2e) as per the registered Joint PD&MR/B01/	Actual Emission Reduction (tCO2e)
2022 (01-August-2022 to 31-December-2022)	153	152,895	133,979
2023 (01-January-2023 to 31-December-2023)	365	363,168	319,623
Total	518	516,063	453,602

¹² <https://verra.org/wp-content/uploads/imported/methodologies/VMRO006-Methodology-for-Installation-of-High-Efficiency-Firewood-Cookstoves-v1.1.pdf>

¹³ <https://verra.org/wp-content/uploads/imported/methodologies/VMRO006-Methodology-for-Installation-of-High-Efficiency-Firewood-Cookstoves-v1.1.pdf>

Year	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2022 (01-August-2022 to 31-December-2022)	133,979	-	-	133,979
2023 (01-January-2023 to 31-December-2023)	319,623	-	-	319,623
Total	453,602	---	--	453,602

The verification team has checked and confirmed the emission reduction calculations in the spreadsheet and found to be accurate. The monitoring report/01/ is supported by emission reduction spreadsheet/02/. The consistency and formula were verified and found to be accurate.

VKU is of the opinion that this method of calculation of emission reductions is accurate and results in conservative estimation of emission reduction and is in line with the applicable VCS requirements set out in section 3.15 of VCS Standard version 4.6/B03/ and that the verification of the GHG statement was conducted in accordance with ISO 14064-3; 2019.

PP Sampling Plan and Samples

Verification Team concluded that PP sampling plan and sample size calculation (mentioned in MR Section 4.3) is correct, transparent and in compliance with registered Joint PD&MR/B01/, CDM Sampling standard/B09/ and CDM sampling guideline/B10/. Total 82 samples were monitored by the PP and 100% are operation as per the survey record. And the same has been confirmed by the VVB during remote audit interview with randomly selected end user that samples are operational.

4.5 Non-Permanence Risk Analysis

This is not an AFLOU project, hence non-permanence risk is not applicable to the present project activity.

5 VERIFICATION OPINION

5.1 Verification Summary

VKU Certification Pvt. Ltd. (referred to as VKU) declares that it conducted the second verification of the project activity “Reduced Emissions from improved and Efficient Coking in Ugandan Communities”, for the monitoring period 01-August-2022 to 31-December-2023, (inclusive of both start and end dates), VCS Registry Project ID 3045, with regard to the relevant requirements for VCS activities. The project proponents of the “Reduced Emissions from improved and Efficient Coking in Ugandan Communities” amount to 453,602 tonnes of carbon dioxide equivalent (tCO₂e). These reported reductions have been assessed in accordance with the relevant requirements outlined in the VCS Standard, version 4.6/B03/.

The project proponents of the “Reduced Emissions from improved and Efficient Coking in Ugandan Communities” are responsible for:

- The preparation of greenhouse gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered joint PD&MR/B01/.
- The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project.

It is the responsibility of VKU to express an independent verification opinion about the project's conformity with the requirements of VCS Standard version 4.6/B03/ and GHG program applied, on the reported greenhouse gas emission reductions from the project.

VKU bears the responsibility of issuing an independent verification opinion regarding the project's compliance with the requirements of the VCS Standard, version 4.6/B03/ and GHG program applied, on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and confirmed by a remote assessment of the project, VKU can confirm that:

- the project has been implemented and operated as per the joint project description & monitoring report version 03 of 05-February-2023/B01/;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS standard version 4.6 requirements/B03/;
- the monitoring is in place as per the applied baseline and monitoring methodology;
- The monitoring plan in the joint project description version 03 of 05-February-2023 & monitoring report /01/is as per the applied baseline and monitoring methodology.

VKU's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. VKU Certification planned and performed the verification by obtaining evidence and other information and explanations that VKU Certification considered necessary to give **Reasonable level of assurance** that reported GHG emission reductions are fairly stated.

As per VCS Standard Version 4.6, clause 4.1.23, 4.1.24 and 4.1.25, VKU is of opinion that that GHG emission reduction stated in the monitoring report/01/ for the "Reduced Emissions from improved and Efficient Coking in Ugandan Communities" in Uganda for the period 01-August-2022 to 31-December-2023 (Inclusive of both start and end dates) **are fairly and correctly stated**.

5.2 Verification Conclusion

Table No. 12: Opinion/Conclusion by Validation-Verification Body:

Opinion	Final Documents	Monitoring Period	Emission Reductions achieved	Remarks
Positive opinion ☒ Negative Opinion ☐ Adverse Opinion ☐ Unmodified Opinion ☒ Modified Opinion ☐	Monitoring Report Version 1.3 dated 24-July-2024 Emission Reduction Sheet 1.2 dated 04-April-2024	01-August-2022 to 31-December-2023 (Inclusive of both the days)	453,602 tCO_{2e}	The GHG emission reductions are calculated on the basis of approved methodology, VMR0006 /B07/ and the monitoring plan included in the registered VCS Joint PD and MR/B01/

Hence VKU is able to certify that the emission reduction from the project during the current monitoring period 01-August-2022 to 31-December-2023 (Inclusive of both start and end dates) amounts to 453,602 tCO₂e assessed in line with the applicable VCS requirements set out in section 3.15 of VCS Standard version 4.6/B03/.

The VVB hereby issues a resolutely **positive and unmodified opinion**, which is drafted diligently and accurately in strict accordance with ISO 14064-3:2019, /B12/ Section 09, and the precise provisions of Clause 9.7.1.6 & 9.7.2 of ISO 14065:2020. /B12/ This opinion is fully aligned with the exacting requirements delineated in ISO/IEC 17029:2019, Section 9.7./B12/

Our verification process provides a robust and **reasonable level of assurance** regarding the veracity of the reported GHG emission reduction data. This data is devoid of any material misstatements and is steadfastly supported by the evidence furnished by the Project Proponent (PP).

Verification period: 2nd From 01-August-2022 to 31-December-2023 (both the dates included)

Verified GHG emission reductions and carbon dioxide removals in the above verification period:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-Aug-2022 to 31-Dec-2022	133,979	--	-	133,979	NA	133,979
01-Jan-2023 to 31-Dec-2023	319,623	--	--	319,623	NA	319,623
Total	453,602	--	--	453,602	NA	453,602

5.3 Ex-ante vs Ex-post ERR Comparison

Net GHG Emission Reduction for total project activity instances under the given projects are;

Vintage period	Ex-ante estimated reductions/removals ¹⁴	Achieved reductions/removals	Percent difference	Explanation for the difference
01-Aug-2022 to 31-Dec-2022	152,895 tCO ₂ e	133,979 tCO ₂ e	13.19%	Verification Team confirmed as per the remote audit and desk review that the project distributed more than one stove model. Consequently, the weighted average thermal efficiency of the stoves was used for the ER calculation. And the change in the number of ICSs distributed is consisted with as mentioned in the Joint VCS PD & MR/B01/.
01-Jan-2023 to 31-Dec-2023	363,168 tCO ₂ e	319,623 tCO ₂ e	12.75%	Verification Team confirmed as per the remote audit and desk review that the project distributed more than one stove model. Consequently, the weighted average thermal efficiency of the stoves was used for the ER calculation. And the change in the number of ICSs distributed is consisted with as mentioned in the Joint VCS PD & MR/B01/.
Total	516,063 tCO ₂ e	453,602 tCO ₂ e	12.88%	Verification Team confirmed as per the remote audit and desk review that the project distributed more than one stove model. Consequently, the weighted average thermal efficiency of the stoves was used for

¹⁴ As per the registered Joint PD &MR/B01/

				the ER calculation. And the change in the number of ICSs distributed is consisted with as mentioned in the Joint VCS PD & MR/B01/.
--	--	--	--	--

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

This section is Not Applicable as per the Remote Interview with Project Proponent.

<i>Section</i>	<i>Information</i>	<i>Justification</i>	<i>Assessment method and conclusion</i>
NA	NA	NA	NA

APPENDIX 2: ABBRIVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
BE _f	Baseline Emission Factor
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
HH	Household
IPCC	Intergovernmental Panel on Climate Change
MoV	Means of Verification
MR	Monitoring Report
N/A	Not Applicable
OSV	On Site Visit
PAI	Project Activity Instances
PDD	Project Design Document
PP(s)	Project Proponent(s)
QA/QC	Quality Assurance /Quality Check
Ref.	Document Reference

SS(s)	Sectoral Scope(s)
SOF	Sample Operational Factor
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCU	Verified Carbon Unit
VCS	Verified Carbon Standard
VKU	VKU Certification Private Limited
VVS	Validation and Verification Standard
VVB	Validation and verification body

APPENDIX 3: QUESTIONNAIRES FOR END USERS INTERVIEW

Appendix: 1¹⁵

Household / Stakeholder's Details for Improved Cookstoves Projects by end-user visited by Assessment team as per VVB Sample selected

Sr. No.....	
End-user/ Stakeholder's name <i>(Indicate relationship with owner in case is different person)</i>	
ID of the related sales agreement/Any relevant document	
Location with coordinates <i>(Village / District / Region / neighbourhood)</i>	
Device Model / Type/Size (fill according to applicability)	
Date of purchase/installation/distribution	
ID of the device	
Is the device in operation? How many in number?	Yes/No
Is the baseline stove in use?	Yes/No
How many dependants in the household? (Family Size)	

¹⁵ This is appendix of VKU Internal document VKU.F62W. Field Assessment Checklist for Sample Selected by VVB for Energy Demand – Distribution

How many meals cooked per day? <i>(Per day preferentially, other measures allowed)</i>	☐ Breakfast ☐ Lunch ☐ Dinner
Do you know how to contact CME/PP/PD in case of any problem/complaint/suggestion?	Yes/No
Is there any test that has been conducted for your device by CME/PP/PD? <i>(e.g., efficiency tests)</i>	Yes/No
How much it saves? <i>(% of firewood save/Currency/day preferentially, other measures allowed but trying to keep homogeneity)</i>	☐ < 30% saving ☐ 30 % – 50 % saving ☐ 31 >50 % saving
Is there any other previous device in use actually? In which situations?	Yes/No. If yes, explain.
Which was the previous used fuel?	Firewood/Charcoal/Coal/LPG/others-
Cooking inside home? Outside?	☐ Inside ☐ Outside
Opinion about:	☐ Less smoke observed ☐ Respiratory wellness improved ☐ Decrease in Allergies ☐ No Itching in eyes ☐ Time-saving ☐ Fuel Saving
The user is happy with the stove. <i>(Include any comments of the user)</i>	Yes/No If No, please comment
Signature/Thumb Impression of the end-user: <i>(If the end-user doesn't want to sign, respect the decision)</i>	

APPENDIX 4: AUDIT FINDINGS

CL: 06 Clarification Request

CAR: 03 Corrective Action Request

FAR: 00 Forward Action Request

Verification Team confirmed that all CARs (03) and CLs (05) are closed successfully.

Type	Date	12-March-2024
CAR#01	Reference	Section of Ver protocol
Description of the Non-Conformance		
1. Cover Page: • PP needs to remove template guideline from the cover page of MR. • The font colour is not consistent with VCS MR template v4.3, title page formatting. The formatting should be checked all throughout the MR. The format of date is also inconsistent with VCS MR template filling guidelines. 2. Contents: • PP has mentioned Appendix X in content table, although no appendix X has been found in the report. 3. Section 1.2: • PP has not provided complete information in this table, as per VCS MR template v4.3 and principle 4.3 Completeness of ISO 14064-2. Also, the time period (number of years) mentioned is not adding up to the validation/verification period length mentioned in the table. • The format of date is not consistent with the audit history table of VCS MR template v4.3. 4. Section 1.6: • The format of date is not in accordance with the VCS MR template v4.3. 5. Section 1.7: • The format of date is not in accordance with the VCS MR template v4.3. 6. Section 1.12: • PP has not correctly mentioned SDG target and SDG indicator in the entire table, as per the VCS MR template v4.3.		

7. Section 2.1:

- The template is found to be tempered. PP cannot remove/delete or alter any table or section of monitoring report template.
- The information filled in the section is not in-line with MR template filling guidelines and VCS validation and verification standard v4.6, para 3.18.5 and 3.18.6.

8. Section 2.1.2:

- The template is found to be tampered in this section.
- PP has not deleted the guideline while making this report. PP is required to check this throughout the template.
- PP has not provided any justification the column “Mitigation or preventive measure taken” of this section and left the column blank. PP cannot leave the column blank as per the VCS template v4.3 and Section 4.6 ‘Transparency’ of ISO 14064-2.

9. Section 2.1.3:

- PP has provided the incomplete information.
- As per the remote audit, Verification Team found that end users also contact the responsible person via call to redress their grievances. Clarification is required.

10. Section 2.3.1:

- PP shall not leave the sections blank as per the MR template filling guidelines and Section 4.6 ‘Transparency’ of ISO 14064-2.

11. Section 2.4

- The column “Mitigation or preventive measure taken during the monitoring period” cannot be left empty as per the guidelines of VCS MR template v4.3.

12. Section 3.1:

- PP has not clearly stated what is being ‘Implemented’ in the statement. PP is required to rephrase.

13. Section 4.1:

- The font colour in this section is not consistent with the MR template v4.3.

14. Section 5.4

Font style is not consistent with the Mr template v4.3.

1 st Response from PP	Date	16-March-2024
1. Cover page, the formatting of the MR has been updated as per the VCS MR template v4.3 in MR. Kindly refer the updated MR Template.		
2. Numbering of Appendix has been corrected.		

3. Section 1.2 is updated now in MR updated as per the VCS MR template v4.3. Kindly refer the latest MR template.
4. Section 1.6 is updated now in MR updated as per the VCS MR template v4.3 regarding the format of date. Kindly refer the latest MR template.
5. Section 1.7 is updated now in MR updated as per the VCS MR template v4.3 regarding the format of date. Kindly refer the latest MR template.
6. The table alignment in section 1.12 was disrupted, causing columns to extend beyond the page. Despite mentioning the SDG Target, this section of the MR has now been revised to include updates on both the SDG target and SDG indicators. Kindly refer the latest MR template.
7. Section 2.1 of MR has been revised as the table was deleted by mistake.
8. After the correction in the numbering, section 2.1.2 has been changed to 2.1.3. Accordingly, Section 2.1.3 of MR has been revised as per the VCS MR Template Version 4.3.
9. Section 2.1.3 of MR has been revised as per the VCS MR Template Version 4.3. The end-users are well-aware of the procedure to address their grievances, which was verified by the VVB during the remote audit visit. However, no grievances were received during the current monitoring period.
10. Section 2.3.1 has been revised accordingly.
11. Table provided in the Section 2.4 has been revised accordingly.
12. Section 3.1 has been revised accordingly.
13. Section 4.1 has been revised accordingly as per MR template v4.3.
14. Section 5.4 has been revised accordingly as per MR template v4.3.

1stAssessment by Audit Team

Status

Closed

Date

26-March-2024

1. Cover Page:

PP has corrected the formatting of Monitoring report as per the guidelines of VCS MR template version 4.3. Format of date has also been aligned with the MR template. Hence, the finding is closed.

2. Contents:

PP has corrected the content of the monitoring report and the number of appendix has been corrected. Hence, the finding is closed.

3. Section 1.2:

PP has completed the audit history table in section 1.2 of the report as per the VCS MR template version 4.3. The time period of the verification/validation has been corrected and the format of date has also been made consistent with the MR template filling guidelines. Hence, the finding is closed.

4. Section 1.6:

It is found that the PP has updated the format of date as per the latest VCS MR template, hence the finding is closed.

5. Section 1.7:

PP has updated the format of date as per the latest VCS MR template hence the finding is closed.

6. Section 1.12:

The table regarding the SDG indicators in section 1.12 has now been updated and corrected in the MR, the SDG target and SDG indicator have been correctly mentioned in the revised MR. hence, the finding is closed.

7. Section 2.1:

The template is found to be intact in the revised MR. Hence, the finding is closed.

8. Section 2.1.2:

The sections 2.1.2 and 2.1.3 have been corrected in the revised MR. Hence, the finding is closed.

9. Section 2.1.3:

PP has revised the section 2.1.3 as per VCS MR template version 4.3. Hence, the finding is closed.

10. Section 2.3.1:

PP has revised the section 2.3.1 and the blank sections have been updated in the revised MR. Hence, the finding has been closed.

11. Section 2.4:

PP has updated the table "Mitigation or preventive measure taken during the monitoring period" in the revised MR. Hence, the finding is closed.

12. Section 3.1:

The statement has been revised and corrected in this section of MR. Hence, the finding is closed.

13. Section 4.1:

The font colour has been made consistent with revised MR. Hence, the finding is closed.

14. Section 5.4:

The font style formatting is corrected in the revised version of MR. Hence, the finding is closed.

Type	Date	12-March-2024
CAR#02	Reference	ER Sheet
Description of the Non-Conformance		
1. ER Calculation: - The units of parameter B_{old,wood,i,j} and B_{old,charcoal} is inconsistent with the registered PD. - Verification Team found that the given value for ex ante for current monitoring period is not correct as per the registered Joint PDMR. - The value mentioned for ERs achieved during this monitoring period is found to be incorrect. 2. Assumption: PP has not provided reference for the parameters “non-CO₂ emission factor and CO₂ emission factor” in this section of ER sheet. 3. Installation summary: PP has not provided unit of the parameter ‘Model wise age’.		
1stResponse from PP	Date	16-March-2024
1. ER Calculation: - The units of parameter B_{old,wood,i,j} and B_{old,charcoal} is made consistent with the registered PD and the applied methodology.. - As per the registered PD, the Ex-ante ER for 2022 and 2023 are 364,750 tCO₂e and 363,168 tCO₂e respectively. This value is calculated for a complete year. However, the amount estimated ex-ante as mentioned in the ER calculation sheet is calculated for 518 days, duration of the current monitoring period. Kindly refer the demonstration in the ER Calculation sheet. - The ER for this monitoring period has been revised based on the change in value of weighted average for the stove year, replacing the value of simple average for the same parameter. 2. The reference as per the registered Joint PD-MR document, “2006 IPCC Guidelines for National Greenhouse Gas Inventories; Chapter 2 Stationary Combustion”, has been mentioned for the parameters “Non-CO₂ emission factor and CO₂ emission factor” in the Tab” Assumptions” of the updated ER calculation sheet. 3. The unit for the parameter ‘Model wise age’ has been provided in the Installation summary tab of the updated ER Calculation sheet.		

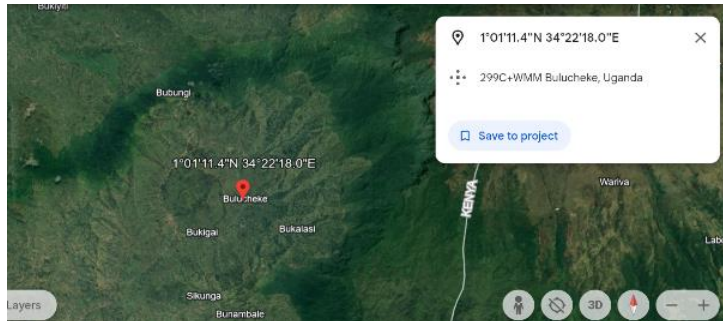
1stAssessment by Audit Team	Status	Closed	Date	26-March-2024
1. ER Calculation: - PP has aligned the parameters $B_{old,wood,i,j}$ and $B_{old,charcoal}$ in the revised version of MR with registered VCS joint PD & MR and with applied methodology. Hence the finding the is closed. - It is found that PP has justified the values of ex-ante emission reductions in the ER sheet for current monitoring period. Hence, the finding is now closed, 2. Assumption: PP has provided the relevant references for the parameter “non-CO2 emission factor and CO₂ emission factor” in this section of ER sheet. Hence, the finding is closed. 3. Installation summary: It is found that PP has provided the unit of parameter ‘Model wise age” in the updated version of MR. Hence, the finding is closed.				

Type	TR Comments	Date	02-April-2024
CAR#03		Reference	Sections of Monitoring report: Cover page,1.4, 1.5, 1.6, 1.7, 1.8, 1.11.3, 2.1.3, 2.1.4, 2.2, 2.3.2, 2.3.3, 2.3.4, 2.4.1, 2.4.3, 3.1, 3.4.
Description of the Non-Conformance			
1. Cover Page: - The font colour, space, size & type is not consistent with VCS MR template v4.3, title page formatting. The formatting should be checked all throughout the MR. The format of date is also inconsistent with VCS MR template filling guidelines. - PP has not used the latest Version of VCS Standard. As the latest version of VCS Standard available on verra website is 4.6. 2. Section 1.4, 1.5, 1.6,1.7:			

- Font colour is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template Version 4.3.

3. Section 1.8:

- Geo-coordinates mentioned in the section did not direct to the mentioned location (Manafwa) which is not consistent with MR template filling guideline v4.3



4. Section 1.11.3:

- PP has not used the latest Version of VCS Standard. As the latest version of VCS Standard available on verra website is 4.6.

5. Section 2.1.3:

- The Font colour is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template filling guideline Version 4.3.

6. Section 2.1.4:

- The Font colour, type & size is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template filling guideline Version 4.3.

7. Section 2.2:

- The Font colour is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template filling guideline Version 4.3.

8. Section 2.3.2, 2.3.3, 2.3.4:

- The Font colour is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template filling guideline Version 4.3.

9. Section 2.4.1, 2.4.3:

- PP has not followed the VCS MR Template filling Guidelines v4.3 i.e., “Where a section is not applicable, explain why the section is not applicable (i.e., do not delete the section from the final document and do not only write “not applicable”).

10. Section 3.1:

- PP has not mentioned the name of third-party lab in which the efficiency of ICS tested.
- PP has not mentioned the basis of values for the efficiency of ICS models.
- Font colour is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template Version 4.3.

11. Section 3.4:

- The Font colour is not consistent as per the requirements mentioned at page no.1 of VCS Monitoring template Version 4.3.

1 st Response from PP	Date	04-April-2024
1. Cover page: • On the cover page, the formatting of the texts has been updated as per the VCS MR template v4.3 filling guideline on page number 2. Kindly refer to the updated MR. • The reference to the latest version of VCS Standard, Version 4.6 has been mentioned in the entire MR. 2. The formatting of the texts in Sections 1.4, 1.5, 1.6,1.7 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 2. 3. The mentioned geo coordinates are cited from, https://latitude.to/articles-by-country/ug/uganda/298727/manafwa. However, the geo-coordinates of Manafwa has been edited to 0° 55′ 11″ N, 34° 17′ 28″ E as cited from https://geohack.toolforge.org/geohack.php?pagename=Manafwa&params=00_55_11_N_34_17_28_E_region:UG_type:city(16000) 4. The reference to the latest version of VCS Standard, Version 4.6 has been mentioned in the entire revised version of MR. 5. The formatting of Section 2.1.3 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 1.		

6. The formatting of Section 2.1.4 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 1. 7. The formatting of Section 2.2 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 1. 8. The formatting of Sections 2.3.2, 2.3.3, 2.3.4 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 1. 9. The Sections 2.4.1, 2.4.3 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline. Explanation of the non-applicability of this section is provided as per the VCS MR Template guidelines. 10. Section 3.1: - The name of the third-party lab in which the efficiency of ICS tested has been mentioned in section 3.1 of the revised MR. - The source of the value has been mentioned in section 3.1 of the revised MR and for the demonstration kindly refer the ER calculation sheet. - The formatting of Section 3.1 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 1. 11. The formatting of Section 3.4 of the revised MR has been updated as per the VCS MR template v4.3 filling guideline on page number 1.				
1stAssessment by Audit Team	Status	Closed	Date	06-April-2024
1. Cover Page: - The formatting of the cover page including the font colour, space, size and type has been made consistent with VCS MR template v4.3(title page formatting). The date format has been corrected in the corrected in the revised MR as per the VCS MR template filling guidelines. Hence, the finding is closed. - PP has mentioned the latest version of VCS Standard (i.e. version 4.6) in the revised MR. Hence, the finding is closed. 2. Section 1.4, 1.5, 1.6, 1.7: - PP has corrected the text formatting in sections 1.4, 1.5, 1.6, 1.7 of the revised MR and it now found to be consistent with the VCS MR template v4.3 filling guidelines. 3. Section 1.8: - PP has updated the geo-coordinate in the revised MR, which is directing to the mentioned location (Manafwa). Hence, the finding is closed.				

4. Section 1.11.3:

- PP has updated the version of VCS Standard, i.e. version 4.6 in section 1.11.3 of revised MR. Hence, the finding is closed.

5. Section 2.1.3:

- The font colour is updated in section 2.1.3 of revised MR and is found to be consistent with the VCS MR filling guideline. Hence, the finding is closed.

6. Section 2.1.4:

- PP has updated the formatting in section 2.1.4 of the revised MR. The font colour, type and size are found to be consistent with the VCS MR template version 4.3. Hence, the finding is closed.

7. Section 2.2:

- PP has updated the font colour in section 2.2 in the revised MR, as per the VCS MR template v4.3(Page 1). Hence, the finding is closed.

8. Section 2.3.2, 2.3.3, 2.3.4:

- PP has updated the formatting (font colour) in section 2.3.2, 2.3.3, 2.3.4 in the revised MR. the formatting is found to be consistent with the VCS MR template version 4.3. Hence, the finding is closed.

9. Section 2.4.1, 2.4.3:

- PP has updated the sections 2.4.1, 2.4.3 in the revised MR. The justification for non-applicability of these sections have been provided by PP. Section 2.4.1 and 2.4.3 are found to be consistent with VCS MR template filling guidelines, v4.3. Hence, the finding is closed.

10. Section 3.1:

- PP has added the name of third-party lab (i.e. CREEC-Centre for research in energy and energy conservation, KIRDI Stove Testing Centre) in section 3.1 of revised MR. Hence, the finding is closed.
- PP has mentioned the source for the values of $By_{savings}$ for each cookstove model in the revised MR. Hence, the finding is closed.
- PP has updated the formatting (font colour) in section 3.1 of revised MR. Hence, the finding is closed.

11. Section 3.4:

- The formatting (font colour) of section 3.4 is updated and found to be consistent the VCS MR template v4.3. Hence, the finding is closed.

Hence, the assessment team confirms that the CAR#03 has been resolved and closed.

Type	Date	12-March-2024
CL#01	Reference	Section of Val/Ver protocol
Description of the Non-Conformance		
1. Cover page: - PP has not clarified whether the monitoring period is including both the dates. 2. Section 1.1: - It is found that one date is not mentioned here as per the survey records. 3. Section 1.9: - PP has not provided any reference link of applied methodology and tools. 4. Section 1.11.3: - PP needs to justify in this section why 'NO' the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain? 5. Section 1.12: - PP has to clarify on what basis it is stated that HAP in the households due to reduced exposure to PM and other emissions (SDG 3.9.1), even though there is no monitoring survey done by PP as per the Monitoring survey result. 6. Section 2.1.1: - It is found that lack of information has been provided in this section. PP has not clarified the required information. 7. Section 2.3.2: - PP has not clarified why the section 2.3.2 is not applicable for this monitoring report?		

8. Section 2.3.3:

- PP has not clarified why the section 2.3.3 is not applicable for this monitoring report?

9. Section 2.3.4:

- PP has not provided any justification in this section.

10. Section 2.3.5:

- PP required to clarify that is any stakeholder (end users) renegotiated or opted out of the plan during the monitoring period if yes, PP need to describe the changes to the benefit sharing agreement. Refer MR template v4.3.
- PP has used futuristic sentence in this section. It is found that this is the template guideline which has been user as it is by PP.

11. Section 4.1:

- PP has not provided any reference link for “UN Data for household fuelwood and charcoal consumption” in this section.

12. Section 4.2:

- PP has not clarified in this section whether the monitoring period is including both the dates.

13. Section 4.3:

- PP has not provided any reference link for ‘Sampling Standard version 09.0’ in this section.
- PP has not clarified why Masupa model has been mentioned in the category of wood stove? This is found to be inconsistent with the registered VCS PD of the project.
- PP has not clarified the mode of monitoring survey.

14. Section 5.2:

- PP has not provided any reference in this section.

15. Section 5.3:

- PP has not provided any reference in this section.

1 st Response from PP		Date	16-March-2024		
1. Cover page has been revised as per the VCS MR Template version 4.3. 2. All the survey dates are mentioned in the section 1.1 as per the survey records. 3. The reference link of the applied methodology and tools has been added in the section 1.9 of the revised MR Template. 4. All required information has been provided in the revised MR. 5. The monitoring survey incorporated inquiries about the change in the smoke level, incidence of coughing, incidence of difficulty in breathing and incidence of itchy eyes due to replacement of the conventional stoves by the use ICSs. Reduction of 100% smoke was monitored which has resulted in 100% reduction in incidence of itchy eyes among the ICSs end users. Response from the end-users to the other questions also provide evidence for the reduction of HAP and for SDG 3. Kindly refer the survey results tab in the ER Calculation sheet. 6. Section 2.1.1 of the MR has been revised as per the VCS MR Template Version 4.3. 7. Section 2.3.2 of the MR has been revised as per the VCS MR Template Version 4.3. 8. Section 2.3.3 of the MR has been revised as per the VCS MR Template Version 4.3. 9. Section 2.3.4 of the MR has been revised as per the VCS MR Template Version 4.3. 10. No end users renegotiated or opted out of the plan during the monitoring period. Thus, no change in the benefit sharing agreement. The use of futuristic sentence was a typo error and accordingly the Section 2.3.5 has been revised. 11. The reference link for “UN Data for household fuelwood and charcoal consumption” in the section 4.1 has been provided. 12. The section 4.2 of the MR is revised. Both the start and end dates as mentioned for the monitoring period are included for the current monitoring period. 13. The section 4.3 of the MR has been revised. Masupa, which is a charcoal stove has been mistakenly mentioned as a wood stove in the section 4.3 of the MR. The correction has been made. PP has also included the mode of monitoring survey in this section of MR. 14. Reference has been provided to the mentioned information in the section 5.2 of the MR. 15. Reference has been provided to the mentioned information in the section 5.3 of the MR.					
1 st Assessment by Audit Team		Status	Closed	Date	26-March-2024
1. Cover page: The monitoring period length has been clarified by the PP in the cover page of MR. Hence, the finding is closed.					

2. Section 1.1:

The revised MR contains all the survey dates as per the survey records provided by the PP. Hence, the finding is closed.

3. Section 1.9:

The relevant reference link has been provided in the revised MR for applied methodology and tools. Hence, the finding is closed.

4. Section 1.11.3:

Verification Team confirmed that PP has updated the section in revised MR and it is deemed that there is no applicability of Scope 3 for given project activity. Hence, finding is closed.

5. Section 1.12:

PP has clarified the claim of HAP in the households due to reduced exposure to PM and other emissions with the help of survey results provided in the ER calculation sheet. Hence, the finding is closed.

6. Section 2.1.1:

PP has updated this section in the revised version of MR. the required information has been provided by PP. Hence, the finding is closed.

7. Section 2.3.2:

PP has clarified in detail in the revised version of MR that the project ensures the details of the workers are recorded and are in compliance with the International Labor Organization, as well as national labour laws. Hence, PP had clarified why this section is not applicable. Finding is closed.

8. Section 2.3.3:

PP has clarified in the revised MR why this section is not applicable. Hence, the finding is closed.

9. Section 2.3.4:

PP has provided the required justification in the revised MR. Hence, the finding is closed.

10. Section 2.3.5:

PP has clarified in this section that no end users renegotiated or opted out of the plan during the monitoring period. Thus, no change in the benefit sharing agreement. PP has also corrected the futuristic sentences, which were mistakenly written in the MR. Hence, the finding is closed.

11. Section 4.1:

PP has provided the relevant reference link for “UN Data for household fuelwood and charcoal consumption” in the revised version of MR. Hence, the finding is closed.

12. Section 4.2:

PP has clarified both start and end dates are included in the monitoring period in this section of MR. Hence, the finding is closed.
13. Section 4.3:
PP has provided the reference link for 'Sampling Standard version 09.0' in the revised version of MR. Also, PP has provided clarification regarding the category of Masupa stive. The section has been updated in the revised version of MR. Hence, the finding is closed.
14. Section 5.2:
The relevant reference has now been provided in the revised MR. Hence, the finding is closed.
15. Section 5.3:
The relevant reference has now been provided in the revised MR. Hence, the finding is closed.

Type	Date	12-March-2024
CL#02	Reference	Section of Ver protocol
Description of the Non-Conformance		
PP has not provided any evidence to support the following: • Evidence to verify that the project is not double claiming with other forms of environmental credit (Refer VS MR template v4.3, VCS standard v4.6) • Declaration for supply chain emission • Evidence for project's SD contributions in appendices (Refer VCS MR template v4.3) • Grievance records • Ownership agreement/ declaration • Efficiency of each cookstove model • Sample of commissioning certificate (As primary evidence we have registered PD.) • Monitoring survey questionnaire • Manufacturer specification to verify the parameter '$\eta_{new,i,j}$'		
1stResponse from PP	Date	16-March-2024
All the relevant documents are submitted to the VVB		

1stAssessment by Audit Team	Status	Closed	Date	26-March-2024
Assessment team confirms that PP has provided the supporting evidences for the following: • Evidence to verify that the project is not double claiming with other forms of environmental credit (Refer VS MR template v4.3, VCS standard v4.6) • Declaration for supply chain emission • Evidence for project's SD contributions in appendices (Refer VCS MR template v4.3) • Grievance records • PP submitted the carbon wavier agreement for the same • Efficiency of each cookstove model • Sample of commissioning certificate (As primary evidence we have registered PD.) • Monitoring survey questionnaire • Manufacturer specification to verify the parameter 'η_{new,i,j}'				

Type	Date	12-March-2024
CL#03	Reference	ER Sheet
Description of the Non-Conformance		
1. ER Calculation: • PP has not clarified what do the dates '01-Jan-2023' and '01-Aug-2022' represent in this tab of ER sheet. • PP needs to clarify if the total number of MP days including both the start and the end date, hen the given value is wrongly mentioned. • Verification Team found that 1.121 is value of simple average and applied value and not of weighted average. Clarification is required. • As per the registered PDD Ny,1,1Masupa value is only 832. PP is required to clarify. How many new cookstoves distributed during current monitoring period. Consider same clarification for Jikokoa and Kuniokoa. • Verification Team found calculation formula used for ERY is not consistent with the registered PDD and applied methodology equation 2. • PP needs to clarify is both start and end date included in the MP in column "total number of days in MP" in this section of ER sheet.		

2. Average age calculation: PP required to clarify that why not PP considering From L2 to L58794?		
1stResponse from PP	Date	16-March-2024
1. ER Calculation: - Kindly note that the significance of the dates is evident from the calculation of the total number of days in each vintage of the current monitoring period. However, as VVB has raised an clarification to the dates mentioned, ER Calculation sheet has been revised accordingly. 01-Aug-2022 and '01-Jan-2023 are the first date of the vintage 2022 and 2023 respectively of the current monitoring period. Both the dates are mentioned to calculate the number of days in each vintage of the current monitoring period. - Both the start and end dates of the stated monitoring period have been included for the calculation of ER. Kindly refer the Updated ER Calculation sheet. - The weighted average has been used for the calculation of the stove age (Year). Kindly refer the Updated ER Calculation sheet. - Kindly refer the ER Calculation sheet and the database submitted. The number of new cookstoves distributed during this monitoring period is 44,705 including all the three models. 44,235 ICSs of Masupa, 2 ICSs of Kuniokoa and 468 ICSs of Jikokoa were distributed during 2022 and 2023. The PP has included all the stoves operating from the start date of the project to the last date of this monitoring period, resulting in an increase in the number of stoves. Kindly note that 832 is the number of Masupa model stoves after the discount. The total number of stoves are divided by the average number of domestic stoves per user (Since multiple stoves are bought by a single person) to calculate the number of stoves operating during the particular vintage. - Please refer the applied methodology Version 1.1 for the clarification on the raised issue. As the concern pertains to the inconsistency found in the equation used for ER calculation comparing it with the equation (2) as per the applied methodology, detailed information can be found from page 11 of the VMR0006 Version 1.1, where, the use of parameter accounting for Continued Use of Baseline Stoves is explained. Moreover, the clarification regarding the use of parameter, proportion of operational stoves can be found from the table for Number of project devices of type i operating during year y as mentioned in the section 9.2 of VMR0006 Version 1.1. Weighted average for the stove year is		

calculated to compute the average age for the stoves in the entire monitoring period. - The calculation of total number of days in the current monitoring period has included both the start and end date as mentioned for the monitoring period. Kindly refer the ER Calculation sheet. 2. Average age calculation: - The calculation of the average age of the stoves has been revised. Kindly refer the updated ER Calculation sheet.				
1stAssessment by Audit Team	Status	Closed	Date	26-March-2024
1. ER calculation: - PP has clarified that the dates mentioned in this section of ER sheet are significant in the calculation of total number of days in each vintage. The dates have also been corrected. Hence, the finding is closed. - Assessment team found that the ER sheet has been updated for the value wrongly mentioned. The ER sheet has been revised. Hence, the finding is closed. - PP revised the ER spreadsheet now weighted average is correct. Hence finding is closed. - PP has clarified the increase in number of ICS and has mentioned the number of new stoves distributed during the current monitoring period for the three models. Hence, the finding is closed. - PP has clarified the calculation in the ER sheet, which is aligned with the applied methodology VMR0006, version 1.1. PP has also clarified the regarding the use of parameter, proportion of operational stoves. Hence, the finding is now closed. - PP has clarified that the monitoring period mentioned in ER sheet includes both the start and the end date. 2. Average age calculation: It is confirmed by the assessment team that PP has revised the calculation regarding the average age in the ER sheet. Hence, the finding is closed.				

Type TR Comments	Date	02-April-2024
CL#04	Reference	Sections of Monitoring report: 1.8, 2.3.1, 3.1, 3.3
Description of the Non-Conformance		
1. Section 1.8: • PP to clarify Project is still proposed or implemented? 2. Section 2.3.1: • PP has not provided the basis & evidence of the statement for labour and work. 3. Section 3.1: • PP to demonstrate the number of cookstoves for each model distributed. 4. Section 3.3: • PP has not clarified that how was the cookstove distributed on 24-12-2023 not considered for new instance of the project activity.		
1stResponse from PP	Date	04-April-2024
1. Section 1.8: • This typo error has been edited. The project is mentioned as implemented in section 1.8 of the revised MR. 2. Section 2.3.1: • Section 2.3.1 of the MR has been revised as per the VCS MR Template filling Guidelines v4.3. 3. Section 3.1: • The number of cookstoves has been mentioned in section 3.1 of the revised MR for each model distributed. 4. Section 3.3: • The ICSs distributed on the mentioned day are of the same Jikokoa model and are distributed in Kampala and Wakiso, districts in Uganda as mentioned in the		

Joint PDD/MR. Thus, the cookstoves distributed on 24-12-2023 are not considered as a new project activity instance.

1 st Assessment by Audit Team	Status	Closed	Date	06-April-2024
1. Section 1.8: - PP has clarified that the project is implemented and is operational phase. The typo error has been corrected in section 1.8. Hence, the finding is closed. 2. Section 2.3.1: - The section has been revised has per the VCS MR template v4.3. Hence, the finding is closed. 3. Section 3.1: - PP has updated the number of cookstoves for each model in section 3.1 of MR. Hence, the finding is closed. 4. Section 3.3: - PP had clarified that the mentioned ICS is of the same Jikokoa model and is distributed in the region of Kampala and Wakiso (Uganda) and is found to be consistent with registered VCS Joint PD & MR. Hence, the finding is closed. Hence, the assessment team confirms that the CL#04 has been resolved and closed.				

Type TR Comments		Date	02-April-2024
CL#05		Reference	Sections of ER Sheet : ER calculation sheet,
Description of the Non-Conformance			
1. ER calculation sheet: PP has not clarified why Discount factor to account for leakage is not considered for ER Calculation.			
1stResponse from PP		Date	04-April-2024
1. Kindly refer page no. 55 of the PDD, where it states "No monitoring for leakage through competitive uses of biomass is required, as the parameter wood usage is multiplied by 95% to account for leakage. ", Thus, B_{old} is multiplied by 0.95 to account for leakage. Kindly refer C19, C20 and C21 in the ER Calculation tab of the revised ER Calculation sheet for the values.			
1stAssessment by Audit Team	Status	Closed	Date 06-April-2024
1. ER Calculation sheet: PP has clarified that PP uses discount factor to account for leakage and it is aligned with the applied methodology VMR0006, v1.1. Hence, the finding is closed. Hence, the assessment team confirms that the CL#05 has been resolved and closed.			

Type (PRR Comments)		Date	06-July-2024
CL#06		Reference	Sections of 2, 1 and 4
Description of the Non-Conformance			
Section 1.11.3 1. PP has not provided the complete information as per the MR template in relation to scope 3 emissions. And as per the page 84 of the VCS Standard v.4.6, it is indicated that this requirement is Effective for all project requests submitted on or after 1 March 2024, whereas this verification request has been submitted in April 2024. PP has also required to clarify it. Section 2.1.2 2. The PP shall require to provide the details of the periodic visits undertaken in the households as part of the on-going communication process under Section 2.1.2 of the MR.			

Section 4.1

3. PP shall have required to justify that the default value for the wood-to-charcoal conversion factor has not been updated in accordance with TOOL 33 Version 2.0, which has been effective since 8 September 2022. Since the emission reductions are being accrued for the period following the release of the updated conversion factor, it is imperative that the emission reduction calculations be revised accordingly. This adjustment is necessary to ensure accuracy and compliance with the latest standards.
4. PP shall required to clarify the following points mentioned below which are related to the section 4.1 of this MR;
 - As per Section 9.2 of VMR0006 v1.1, η_{old} is a monitored parameter. However, it has been listed as a fixed parameter in the monitoring report.
 - The source of data for η_{old} is listed as 'Methodological default value' (page # 29 of the monitoring report), but the value has been taken from another source.
 - It is not clear why the default value of 0.2 for charcoal stoves is not applied which is more conservative that the current value of 0.15.

1stResponse from PP

Date

10-July-2024

Section 1.11.3

1. As per VCS Standard version 4.6, this section (Scope 3 emissions inventories) is effective 1 March 2024 onwards hence this section is not applicable for the current monitoring period i.e., 01-August-2022 to 31-December-2023 (inclusive of both days)

Section 2.1.2

2. The details of the periodic visits undertaken in the households as part of the on-going communication process has been included under the Section 2.1.2 of the revised MR.

Section 4.1

3. Date of Issue according to the "Groupled PD-PersistentClimate Uganda ICS-19-07-22_clean" is 06 July 2022. Meanwhile, the Tool 33 Version 2.0, has been effective since 8 September 2022. All the calculations were conducted using the latest available values at the time of issue.
4. **Section 4.1**
 - Source of data for η_{old} as per the Section 9.2 of VMR0006 v1.1 is methodological default value, which is fixed at ex-ante. This value represents the efficiency of baseline cookstove. Since the grouped project is implemented within the host country of Uganda, the baseline cookstove's efficiency remains fixed for the current crediting period. This has been confirmed by comparing available reference papers. Therefore, it is listed as a fixed parameter in the monitoring report.
 - A default value of 0.1 is used for the three-stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, For traditional charcoal stoves, a research paper, "Development of bioenergy technologies in Uganda: A review of progress" reported efficiency less than 10%, that is without a grate or a chimney. Following instructions as per the Description of measurement methods and procedures to be applied mentioned for the η_{old} in the VMR0006 Version 1.1, PP has conservatively considered a thermal efficiency of 15% for traditional charcoal stoves, Thus, the source of the data is cited as Methodological default value.
 - The explanation is already provided in the table for η_{old} . The research paper as linked in footnote 13, Development of bioenergy technologies in Uganda: A review of progress,

states under section 2.1.1, “Traditional charcoal stoves, on the other hand, are locally made using scrap metal materials such as roofing sheets and oil drums, but do not have insulation lining; therefore, leading to excessive heat loss during operation. The efficiency of these stoves is reported to be less than 10%). PP has conservatively considered the efficiency as 15%.				
1stAssessment by Audit Team	Status	Open	Date	18-July-2024
Section 1.11.3 1) Since this verification request has been submitted after 1 March 2024, i.e., in April 2024. the response provided by PP is not justified. (Open) 2) Section 2.1.2 PP has clarified the details regarding on-going communication process and the house hold visits conducted during the monitoring survey. The same information has been verified during remote interviews with end users and it is found to be consistent with the registered Joint PD&MR Section 2.2 (which states “The stakeholders shall be communicated through the house visits”). Hence, this is accepted by assessment team. 3) Since wood-to-charcoal conversion factor is a fixed parameter and project got registered before the release of the new tool it is not required to be updated. PP’s response is found to be justified and acceptable by VVB, given that the project’s Joint Validation and Verification were conducted and approved using the applicable version of TOOL 33 prior to the release of Version 2.0. Hence, this is found to be acceptable by assessment team. 4) Section 4.1 The explanation is incomplete and inconsistent. PP has not provided proper explanation for methodology and the discrepancy in the source of data. (Open)				
2nd Response from PP			Date	24-July-2024
Section 1.11.3 1) The emissions footprint of the cookstoves is unaffected by the project's distribution activities. Despite being part of a supply chain, the grouped project activity does not alter the product in a way that would change its emissions profile. Moreover, section 1.11.3 of the revised MR has now been filled as per the recent requirements enforced from 1st March 2024 as per the VCS Monitoring Report Template Version 4.3. Section 4.1 - Dear Reviewer, this is coming from the already VERRA approved PD and value verified against which VERRA approved this project and issues the VCUs. Please note that this is subsequent verification and fixed value related to baseline should neither be questioned, nor be changed until the end of first crediting period. PersistentClimate would like to have a call with Lead Auditor, if you have any doubt. - Under section 9.2 Data and Parameters Monitored, table for ηold in the VMR0006 Version 1.1, the frequency of monitoring is mentioned as “fixed for each individual household at the time of project implementation”. Since this project has not distributed new ICSs in countries other than Uganda nor any new instances, the baseline remains fixed, thus the value is listed as a fixed parameter in the monitoring report.				

- A default value of 0.1 shall be used if baseline device is a three- stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney. Thus, the source of the data is cited as Methodological default value.
As per para 3.15.5 of VCS Standard Version 4.6, PP has used the most recent version of the default values, data and parameters, which were validated and Verified by VERRA.
Refer the finding number 13 in the “PRR-3045-Joint Validation and Verification-06022023.docx”, which raised the same concern by the VERRA reviewer and was successfully resolved, stated as “The justification provided considering 15% nold value for conventional charcoal stoves is acceptable and observation is closed.”.
The information mentioned in this MR is derived from the VERRA-approved PD and value and description were verified, against which VERRA approved this project and issued the VCUs.
- Please note that this is subsequent verification and the fixed value related to the baseline should neither be questioned nor be changed until the end of the first crediting period

2 nd Assessment by Audit Team	Status	Closed	Date	25-July-2024
Section 1.11.3 Based on the PP’s response in Section 1.11.3 in the Monitoring Report and the submission of declaration for the statement made in the MR, VVB confirms that project meets the standard reporting requirements, providing transparency and credibility to the project's emissions accounting. Hence this is found to be acceptable by assessment team. Section 4.1 3After a rigorous assessment of documents and “PRR-3045-Joint Validation and Verification_08Mar2023.pdf” (publicly available on VERRA project webpage), VVB concludes that the concern about the 15% efficiency value has been previously raised and resolved during the “Joint Validation and Verification Approval” process. The acceptance by the VERRA reviewer indicates that the 15% value is appropriate and compliant with the verification process. The inclusion of the VERRA reviewer’s statement as a ready reference provided in PP’s response reinforces the appropriateness of the 15% value. This documented acceptance provides a solid basis for the decision. Moreover, VVB has assessed the compliance of the source and value of the parameter nold with registered Joint PD&MR. Hence, in conclusion, the client's response is correct and justified based on previous resolutions, documented acceptance, and adherence to verification guidelines. Hence, the assessment team confirms that the CL#06 has been resolved and closed.				

Type		Date	DD/MM/YYYY	
FAR		Reference		
Description of the Non-Conformance				
1 st Response from PP		Date	DD/MM/YYYY	
1 st Assessment by Audit Team	Status	Open/Closed	Date	DD/MM/YYYY

APPENDIX 5: COMPETENCE STATEMENTS

Team Leader and Technical Expert T.A.3.1



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Barun Kumar
Nationality	Indian
Countries of Experience	India, South Africa, Kenya, Uganda, DR Congo, Zambia
Education Qualification	B.Sc. (Environmental Science & Water Management) M.Sc. (Ecology & Environmental Sciences)
Year of Experience	12 Years +
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	TA 1.2 - Renewables TA 3.1 - Energy Demand TA 6.1 - Construction TA 7.1 - Transport

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	NO
Verifier	NO
Team Leader	YES
Technical Reviewer	YES
Local Expert (Country Wise)	NO
TA Expert (1.2, 3.1, 6.1, 7.1)	YES
Financial Expert	NO

Reviewed by	Vandana Gupta (Quality Manager)	Date	06/12/2022
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	06/12/2022

Validator/Verifier-Trainee:



Certification Pvt. Ltd.
VKU.F50W, Competence Statement

COMPETENCE STATEMENT

Name	Aastha Verma
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. (Zoology Hons.) M.Sc. (Environmental Science)
Year of Experience	1 year
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	NA

Roles

Project Trainee	NO
Validator/Verifier Trainee	YES
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (Country Wise)	NO
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Vandana Gupta (Quality Manager)	Date	19/05/2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	19/05/2023

Project Trainee



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Megha Modi
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. Biotechnology (Hons) M.Sc. Biotechnology
Year of Experience	Fresher
Area of Expertise	NA
Eligible Sectoral Scope	NA

Roles

Project Trainee	YES
Validator/Verifier Trainee	NO
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (Country Wise)	NO
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Vandana Gupta (Quality Manager)	Date	02/09/2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	02/09/2023

Local Expert (Uganda):



Certification Pvt. Ltd.

VKU.F50W: Competence Statement

COMPETENCE STATEMENT

Name	Mr. Maurice Kabikabule
Nationality	Ugandan
Countries of Experience	Uganda
Education Qualification	Bachelors in Business Administration
Year of Experience	8 years +
Area of Expertise	Financial Auditor and Risk Assessor
Eligible Sectoral Scope	NA

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (Country Wise)	YES
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Vandana Gupta (Quality Manager)	Date	24.08.2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	24.08.2023

Technical reviewer and technical expert T.A.3.1



VKU
Certification Pvt. Ltd.

VKU.F50W, Competence Statement

COMPETENCE STATEMENT	
Name	Vivek Kumar Ahirwar
Nationality	Indian
Countries of Experience	India, Madagascar, Thailand, Nepal, South Africa, Vietnam, Mozambique, Kenya, Ethiopia, Spain, Singapore, Zimbabwe, Columbia, Zambia, Libya, Indonesia, Myanmar
Education Qualification	B.E.(Mechanical) M.Tech.(Energy Management)
Year of Experience	15 Years +
Area of Expertise	Climate Change & Environment & Industry
Eligible Sectoral Scope	TA 1.1 Thermal Energy & Biomass TA 1.2 Renewables/Non-renewables TA 2.1 Energy Distribution TA 3.1 Energy Demand TA 13.1 Solid waste and Wastewater

Roles	
Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	YES
Verifier	YES
Team Leader	YES
Technical Reviewer	YES
Local Expert (Country Wise)	YES
TA Expert (TA 1.1, 1.2, 2.1, 3.1, 13.1)	YES
Financial Expert	YES

Reviewed by	Apoorva Gupta (Quality Manager)	Date	11/10/2023
Approved by	Barun Kumar (Technical Manager)	Date	11/10/2023