INSTALLATION OF HIGH EFFICIENCY WOOD BURNING COOKSTOVES IN KENYA

Document Prepared By:

VKU Certification Pvt. Ltd.

Regd. Off: Flat No. 306,Sky Star, N-1, New Rani BaghKhandwa Road, Indore, Madhya Pradesh, India - 452020
URL: http://vkucertification.com | e-mail:info@vkucertification.com

Project Title	Installation of high efficiency wood burning cookstoves in Kenya
Version	2.0
Report ID	VKU.VER.25.22_VCS_2349

Report Title	Installation of high efficiency wood burning cookstoves in Kenya

Client	C-Quest Capital Stoves Asia Limited
Pages	48
Date of Issue	04-November-2022
Prepared By	VKU Certification Pvt. Ltd.
Contact	Regd. Off: Flat No. 306, Sky Star, N-1, New Rani Bagh Khandwa Road, Indore, Madhya Pradesh - 452020 URL: http://vkucertification.com e-mail: info@vkucertification.com
Approved By	Dr. Vikas Kumar Aharwal (Founder and Director) vikas.aharwal@vkucertification.com
Work Carried Out By	Vivek Kumar Ahirwar - Team Leader & Technical Expert TA 3.1 Shivani Chauhan -Trainee for Verifier Abhishek Kumar Srivastava- Technical Reviewer cum Technical Expert TA 3.1

Summary:

M/s VKU Certification Pvt. Ltd. (hereafter referred as VKU) was commissioned by M/s C-Quest Capital Stoves Asia Limited (hereafter referred as CQC) to verify the greenhouse gas emission reductions reported for the project activity "Installation of high efficiency wood burning cookstoves in Kenya (VCS 2349)", covering monitoring period from 01-September-2021 to 28-February-2022 (both dates included) with regard to the relevant requirements for VCS activities. This is a grouped project activity which involves distribution/construction of fuel-efficient stoves in Republic of Kenya. The project results in reducing the amount of non-renewable biomass used for cooking. Through reduction in non-renewable biomass consumption, the project activity will decrease greenhouse gas emissions.

The purpose of the verification is to have an independent review ex-post determination of the monitored reductions in GHG emissions and verify that monitoring methodology was implemented according to monitoring plan 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 PD.
- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions 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 described in the monitoring plan;
- 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 4.2/3/, VCS standard Version 4.3/4/, VCS validation and verification manual version 3.2/22/, CDM M&P, the latest version of the CDM Validation and Verification Standard/25/, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques. The verification consisted of desk review, on-site assessment and the resolution of outstanding issues and the issuance of the final verification report and certification.

VKU followed the rule-based approach to perform this verification. During the course of verification, a total of 03 findings were raised, which includes: 02 Corrective Action Request (CAR); 01 Clarification Requests (CLs). All the raised findings were raised and successfully resolved by the PP.

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

The GHG emission reductions were calculated on the basis of the approved methodology VMR0006 'Methodology for Installation of High Efficiency Firewood Cookstoves' (version 1.1)/6/ and the monitoring plan included in the project description, version 3.1of 22-February-2022/14/ and version 4.0 of 21-October-2022.

During this verification, 2 Corrective Action Request (CARs) and 1 Clarification Request (CL) 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 CAR and CL are successfully closed after necessary corrections/clarifications by the client. The same has been discussed in Appendix B of this verification report.

In conclusion, it is VKU's opinion that the project activity "Installation of high efficiency wood burning cookstoves in Kenya" VCS project ID 2349, meets all 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 1.1/6/. The monitoring system is in place and the emission reductions are calculated without material misstatement. Hence, VKU is able to certify that the emission reductions from the project during the 2nd monitoring period from 01-September-2021 to 28-Feburary-2022 under fixed 10-year crediting period from 06-October-2020 to 05-October-2030 amounts to 35,244 tCO_2e.

CONTENTS

1 Introduction 6
1.1 Objective 6
1.2 Scope and Criteria 6
1.3 Level of Assurance 7
1.4 Summary Description of the Project 8

2 Verification Process 8
2.1 Method and Criteria 9
2.2 Document Review 10
2.3 Interviews 11
2.4 Site Inspections 12
2.5 Resolution of Findings 16
2.6 Eligibility for Validation Activities 17

3 Validation Findings 17
3.1 Participation under Other GHG Programs 17
3.2 Methodology Deviations 17
3.3 Project Description Deviations 18
3.4 Grouped Project 19

4 Verification Findings 24
4.1 Project Implementation Status 24
4.2 Safeguards 25
4.3 AFOLU-Specific Safeguards 32
4.4 Accuracy of GHG Emission Reduction and Removal Calculations 32
4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals 38
4.6 Non-Permanence Risk Analysis 39

5 Verification conclusion 37

APPENDIX A: ABBREVIATION 39

APPENDIX B: AUDIT FINDING 40

APPENDIX C: COMPETENCY STATEMENTS 46

1 INTRODUCTION

1.1 Objective

M/s C-Quest Capital Stoves Asia Limited (hereafter CQC) commissioned M/s VKU Certification (hereafter VKU) to carry out the second verification of the project "Installation of high efficiency wood burning cookstoves in Kenya (VCS 2349)" for the period from 01-September-2021 to 28-February-2022(both dates included).

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 purpose of the verification is to have an independent evaluation of a project activity by an accredited validation and verification body against the requirements of the VCS Program Guide Version 4.2/3/, VCS standard version 4.3/4/ and GHG program applied, on the basis of the registered project design document/14/.

The verification is for the second monitoring period from 01-September-2021 to 28-February-2022(both dates included).The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) /14/ and /34/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report/1/ and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.

To confirm that the monitoring system is implemented and fully functional to generate Verified Carbon Units (VCUs) without any double counting, and 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.

1.2 Scope and Criteria

The verification scope is:

- To verify that the project is implemented as described in the registered VCS PD.
- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions 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 described in the monitoring plan; 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.
- The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The project is assessed against the requirements of VCS standard version 4.3/4/, VCS program guide version 4.2/3/, VCS validation and verification manual version 3.2/22/ and related rules and guidance. VKU has, based on the recommendations in the latest version of CDM Validation and Verification Standard version 9.0/25/, VCS validation and verification manual version 3.2/22/ 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:

- Completeness check and desk review;
- Remote interviews with stakeholders;
- Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

Verification is not meant to provide any consultancy towards the project proponents. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

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 PD /14/ and revised VCS PD /34/, supporting documents /7//8//9//15//18//19//20//21/ made available to the verifier and information collected through performing interviews.

The technical review was performed by a technical reviewer(s) qualified in accordance with VKU's qualification procedure. The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name
VCS Team Leader, VCS Verifier & Technical Expert TA 3.1	Ahirwar	Vivek Kumar
Validator/Verifier - Trainee	Chauhan	Shivani
Technical Reviewer & Technical Expert TA 3.1	Srivastava	Abhishek Kumar

1.4 Summary Description of the Project

The project has implemented 38,610 improved cook stoves (ICS) in 4 project areas of Kenya until current monitoring period replacing conventional open fire cookstoves. The baseline stoves are conventional system with no improved combustion air supply or flue gas ventilation system as verified from on-site review and interview. The project stoves are having better efficiency compared to baseline cooking system i.e., open fire and therefore results in saving firewood compared to baseline scenario. Each project ICS included in the project activity with an end user agreement executed between end user and CQC/9/. The CQC has agreement for communication to VCS and CQC is acting as entity responsible for communication with VERRA. The project proponent for the project activity which is C-Quest Capital Stoves Asia Stoves Limited, owns the rights to VCUs /7/.

Only one stove model (TLC-CQC Rocket Stove) was distributed in the project with efficiency/9/ of 34.5 % as certified from Aprovecho Research Centre/8/. Under this project two stoves were installed per household in Kenya with per-stove efficiency of 34.5%/9/ which is 32.43% for vintage 1 and 32.11% for vintage 2 of current monitoring period which is calculated as per the equation 5 of the approved methodology /6/. The project technology was witnessed by the audit team during on-site audit and found to be operating as per the specifications and description. Each ICS has a life span of 10 years as confirmed from stove manufacturer specification/9/.

TLC cookstoves manufactured under the project activity match the fixed design specification. This was achieved by using brick molds of specified dimensions to make bricks used for stove construction locally. This ensured, that each stove that is built at individual end user household measures exactly same as the dimensions specified by the manufacturer. Post construction,

training was provided to end users on use, care, and upkeep of these stoves. PP conducted periodic audits and surveillance of the stoves distributed under the project activity to ensure their proper functioning throughout the project lifetime. This along with spot audits and after installation maintenance services, ensure that the project stoves continue to work at efficiencies as specified by the manufacturer/9/.

As per registered project design document and baseline study and justification, it is noted a project ICS can save 2.5463 tonne/year of firewood in vintage 1 of the monitoring period and 2.5094 tonne/year of firewood in vintage 2 of the monitoring period, as calculated using approved methodology VMR0006, version 1.1 /6/. Therefore, 38,610 ICSs results in reduction of 35,244tCO_2e emission reductions per year /2/.

The project's fixed crediting period is from 06-October-2020 to 05-October-2030 (inclusive of both the dates). Emission reductions from 06-October-2020 to 31-August-2021 (both dates included) have already been verified and under issuance process as a part of the first monitoring period/13/ in VERRA registry. For the current monitoring period from 01-September-2021 to28-February-2022 (both dates included) 38,610 ICSs results in overall reduction of 35,244 tCO_2e emission reductions/2/.

2 VERIFICATIONPROCESS

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 4.2/3/, VCS standard document version 4.3/4/. The GHG emission reductions are on the basis of the approved Baseline and monitoring methodologyVMR0006, version 1.1/6/.

The verification consisted of the following three phases

- Completeness check & Document review of the validation report, monitoring plan, monitoring report, monitoring methodology, VCS PD, applicable tools in particular attention to the frequency of measurements, quality of metering equipment including calibration requirements, QA/QC procedures and other relevant documents;
- On-site assessment including Interviews/30/ and actual project scenario;
- Resolution of any Material Discrepancy and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.2 Document Review

During the document review, VKU has applied standard auditing techniques to assess the quality of information provided. The verification was performed primarily based on the review of the monitoring report (MR) version 01 of 30-July-2022 and Version 1.1 of 21-October-2022/01/, the emission reduction calculations spreadsheets with version 01 dated 30-July-2022 received from the PP /02/ were assessed as part of the verification. In addition, the registered Project Design Documents (VCS-PDs) /14/ /34/ in particular the baseline estimations and the monitoring plan for the project was reviewed. The following table lists the documentation that was reviewed during the verification:

/1/	CQC: VCS monitoring report for "Installation of high efficiency wood burning cookstoves in Kenya", version 01 of 30-July-2022 and Version 1.1 of 21-October-2022
/2/	CQC: Emission Reduction Calculation Spreadsheet for "Installation of high efficiency wood burning cookstoves in Kenya", version 01 dated 30-July-2022
/3/	VCS Program Guide, version 4.2 of 22/June/2022
/4/	VCS Standard, version 4.3 of 22/June/2022
/5/	VCS: Monitoring report Template VCS Version 4.1
/6/	VCS: Link -VMR0006-Methodology for Installation of High Efficiency Firewood Cookstoves v1.1
/7/	CQC: Sample copies of end user agreement between PA and end user
/8/	Result of performance test of ICS as per WBT, Test report dated October 2015
/9/	Manufacturer's specification: TLC Brochure - Declaration of ICS life and Efficiency
/10/	UNFCCC: Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities, Ver. 4.0
/11/	UNFCCC: Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 09.0
/12/	Carbon Check: Validation report "Installation of high efficiency wood burning cookstoves in Kenya" version 03 of 10-May-2022
/13/	Carbon Check: Verification report "Installation of high efficiency wood burning cookstoves in Kenya" version 03 of 22-October-2022 (06-October-2020 to 31-August-2021) (Submitted by PP)
/14/	C-Quest Capital Stoves Asia Limited: Registered PD for the project 'Installation of high efficiency wood burning cookstoves in Kenya' version 3.1 of 22-Feburary-2022
/15/	CQC: User survey - Sample User Survey Form - Sample User survey photo taken during survey - Attendance sheet and presentation for data collection training during survey
/16/	VERRA: https://registry.verra.org/app/projectDetail/VCS/2349
/17/	CQC: Project installation database
/18/	CQC: Grievance/Repair/Maintenance- Training records
/19/	CQC: Declaration to avoid double counting, non-inclusion of projects in other standards

/20/	CQC: Monitoring Survey Report (20-November-2021 to 13-December-2021)
/21/	Site visit Photographs and attendance sheet from 12-September-2022 to 15-September-2022
/22/	Validation and verification manual version 3.2 dated 19/10/2016
/23/	UNFCCC: Project search: https://cdm.unfccc.int/Projects/projsearch.html
/24/	Gold Standard Foundation: https://registry.goldstandard.org/projects?q=&page=1
/25/	CDM Validation & Verification Standard version 09.0 dated 09-September-2021
/26/	VCS Program Definitions version 4.2 dated 22/06/2022
/27/	2006 IPCC Guidelines for National Greenhouse Gas Inventories
/28/	Tool 30 v3.0 - Calculation of the fraction of non-renewable biomass
/29/	GPS map camara version 1.2.8
/30/	Interviews conducted onsite from12-September-2022 to 15-September-2022
/31/	Sampling and calculation sheet of Monitoring Period 1 (23-May-2022 to 17-June-2022)
/32/	KML File showing location of project -Kenya
/33/	CQC: VCS monitoring report for "Installation of high efficiency wood burning cookstoves in Kenya", version 2.1 of 21-October-2022 (06-October-2020 to 31-August-2021) (Submitted by PP)
/34/	C-Quest Capital Stoves Asia Limited: Revised PD for the project 'Installation of high efficiency wood burning cookstoves in Kenya' version 4.0 of 21-October-2022 (Submitted by PP)
/35/	Photographs of Brochure taken at site by Verification team of VKU
/36/	Carbon Check: Validation report for revised PD "Installation of high efficiency wood burning cookstoves in Kenya" version 4.0 of 22-October-2022 (Submitted by PP)

2.3 Interviews

The key personnel interviewed, and the main topics of the interviews are summarized in the table below:

	Date	Name and Role	Organization	Topic
1	12-September-2022 to 15-September-2022	Sanjith Kakkat, CQC-CSAT-Associate	CQC-CSAT	• Description of the project activity, ownership, avoidance of double counting, • Emission reductions calculations
2	12-September-2022 to 15-September-2022	Chrispine Iwah (Operation Co-ordinator)	CQC-Kenya	

3	12-September-2022 to 15-September-2022	Eva Mutero (Finance Operating Officer)	CQC-Kenya	• Monitoring plan and monitoring arrangements • Monitoring, recording, QA/QC procedures. • ICS operational status, commissioning details, project investment etc. • Implementation Status, Training to maintain cookstove, Spot-checking mechanism, Documentation, Benefits of the project
4	12-September-2022 to 15-September-2022	Simon Munyoki (Translator)	Local Resident	
5	12-September-2022 to 15-September-2022	Esther Muli (Project Co-ordinator	CQC-Kenya	
6	12-September-2022 to 15-September-2022	Peus Rune (Chief Operating Officer)	CQC-Kenya	
7	12-September-2022 to 15-September-2022	Julie Brown (3 Country manager)	CQC	

	Date	Name and Role	Topic
1	12-September-2022 to 15-September-2022	John Syjsgo	The impact of the project activity on health, economic and overall social upliftment of the community in implementing region.
2	12-September-2022 to 15-September-2022	Naihai Mbiit	

2.4 Site Inspections

VKU audit team from 12-September-2022 to15-September-2022 conducted an on-site inspection following sampling approach as explained in below:

PP's sampling approach:

PP has proposed simple random sampling plan using 90/10 as confidence/precision. This is in line with the Section 8.4 of the applied methodology /14/. The sample size for each parameter is determined following guidelines-Appendix 1 Section 2.1.1 for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0 (EB86, Annex 4) /10/. The monitoring parameters monitored through the sampling plan are:

a) Number of operating unit (ICS) under the project activity

Development of the Verification/Sampling Plan:

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

a) Level of Assurance

b) Materiality

c) Standards of evaluation & reporting for the verification including the assessment criteria

d) Scope and objectives

e) Assessment team and the roles of team members

f) 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

Sampling/Verification Plan-

In order to ensure a complete, transparent and timely execution of the assessment task, the team leader has planned the complete sequence of events necessary to arrive at a substantiated final opinion. Various tools have been established in order to ensure an effective assessment planning.

Step 1- Identification of Materiality threshold

Check the relevant box against applicable threshold level	Threshold	Related to
☒	2%	Quantitative materiality demands that the threshold for materiality with respect to the aggregate of errors, omissions and misrepresentations, individually or in the aggregate, for any reported relative to the total reported GHG emission reductions and/or removals assets shall be limited to two percent.

		The same was verified from PPs sampling survey/15/ and VVBs acceptance sampling, it was found that 100% samples were appropriate and rejection was 0% which is less than 2%.Hence, accepted.

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	Justification	
1.	Monitoring parameter	High	Monitoring not done as per the registered PD	The risk will be mitigated by reviewing the claims in the VCS PD, Monitoring Plan and its assessment based on VCS requirements. The plausibility of the related monitoring parameter can be further cross-checked with the project specific evidence, related to the host country/region and interviews with the related stakeholders (end users/beneficiaries).
2.	Project design: Information on project design without adequate controls related to data, evidences (project/sector related)	High	Project design incorrectly described thus leading to incorrect delineation of the baseline scenario, causal change, threats to the project	The risk will be mitigated by reviewing the claims in the VCS PD/14/and revised VCS PD /34/ and its assessment based on VCS requirements. The background documents including monitoring survey report/15/ (such as those related country specific f_{NRB} study) shall be cross-checked with the project specific evidence, related to the host country/region and interviews/30/ with the related stakeholders.

3.	Accuracy of the monitoring survey	Medium	Inadequately delineated monitoring plan may lead non-compliance of the VCS principle	The risk due to accuracy of the monitoring plan will be ensured by reviewing the VCS PD/14/and revised VCS PD /34/, VCS requirements, sampling tool applied and ensuring feasibility/appropriateness of the monitoring plan by means of onsite interviews with the PP, their associates and the end users.
4.	Competence of personnel involved in conducting monitoring like surveys	Medium	Interview of the personnel involved and check the training records conducting such monitoring.	The risk will be mitigated by reviewing the training records/18/ of the personnel involved in the conducting such surveys and by following the monitoring responsibilities. The training records will be reviewed which will also be confirmed during the interviews/30/.

Sampling Plan:

Where, due to the number of project activity instances, it is unreasonable to undertake an individual assessment of each initial or new instance, the validation/verification body shall document and explain the sampling methods employed for the validation of such instances. Such sampling methods shall be statistically sound. The number of instances included in the project, eligible for monitoring and generation of VCUs shall be proportional to the percentage of sampled instances found to be in compliance by the validation/verification body.

☐	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.,22) calculation is provided below.

AS: Acceptance Sampling

VVB has applied a sampling approach for the onsite interviews as part of assessment in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version09.0/25/. In accordance with the paragraph 39

c of the sampling standard, acceptance sampling has been chosen by the verification team. Verification team has opted for AQL of 1.0 % and UQL of 20%; producer risk of 5% and consumer risk of 5 % as per VVBs professional judgement according to para 30 of Sampling and surveys for CDM project activities and programme of activities v09.0/11/ in determining the VVB's sample size of 22 ICS with acceptance number (c) as 1.

Verification team based on its professional judgement and observation during acceptance sampling, derived its assessment including conclusions as discussed later in the following section of this report. The verification team selected random samples from PP's sample list. 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. No inconsistency was observed for any of the 22 samples with respect to on-site inspection & document review. This assessment of the selected samples was done to ascertain the implementation status of the project activity with respect to the stove types, serial number, location etc. of ICS.

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for VKU's positive conclusion on the project description. To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria. The verification protocol consists of three 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 validation to be verified during verification have not been resolved by the project proponents.

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

In summary, 01 CL and 02 CARs were raised during this verification which were closed successfully and details are given under Appendix B of this report.

2.5.1 Forward Action Requests

Based on the review of the verification report for the 1st Monitoring Period /33/, no FAR found raised which needs to be closed duirng this verification. No FARs were raised in current monitoring period.

2.6 Eligibility for Validation Activities

The project activity is registered under VCS registration reference Number 2349 /16/ under sectoral scope 3, hence this section is not applicable.

3 VALIDATION FINDINGS

The project is already registered under VCS with reference number 2349 /16/. The validation and 1st verification of the project was done by Carbon Check (India) Pvt. Ltd/12/ and it was registered under the VCS registration reference no. 2349. The fixed crediting period is from 06-October-2020 to 05-October-2030. This verification assessment is for the 2nd monitoring period 01-September-2021 to 28-February-2022 (Both dates included).

3.1 Participation under Other GHG Programs

The project is registered only under VCS and not registered in any other GHG program. Based on both independent assessment and declaration submitted by PP/19/, the assessment team accepted the claim that there will not be double counting from this project activity. Thus ensuring emission reduction generated from the project activity will not be double counted hence accepted by the assessment team. Also, assessment team checked the following registries to confirm the same. The details of the registries checked are as follows:

1.https://cdm.unfccc.int/Projects/projsearch.html

2.http://www.goldstandard.org/

3.https://registry.verra.org/app/search/VCS/All%20Projects

Rejection by other GHG programs

The Project is not rejected by other GHG programs. The assessment team as part of double counting diligence explained above, also checked for rejection by any other registries and found that CDM UNFCCC site had registered the project and not rejected it.

The details of the registries checked are as follows:

1. http://cdm.unfccc.int/

2. http://www.goldstandard.org/

3. https://verra.org/verra-standards-and-programs/

3.2 Methodology Deviations

No methodology deviation has been applied during the current monitoring period. Also, there were no deviations identified during the previous verification which were confirmed from the previous verification report under issuanceby CCIPL /13/.

3.3 Project Description Deviations

PP has requested one project description deviation in previous monitoring period (06-October-2020 to 31-August-2021) /33/ which is verified by CCIPL in their verification report /13/. This is also updated in revised VCS PD /34/.

“In the section 3.5 of registered VCS-PD, other than the regulatory surplus and positive list, another step called project method has been added. NPV analysis steps are being added in the revised VCS-PD to confirm the additionality of each project activity instances, where PP has other sources of revenue except carbon credit sales.

In certain villages of Kenya, Implementing Partner has charged a nominal amount for the readymade bricks used for building the stove (for around 2000 ICS). This happened due to the shortage of raw materials like clay and cow dung in that village/ HH vicinity. These raw materials had to be arranged from other locations by implementing partners at additional cost. Other than these 2000 stoves, project Implementer/Project Proponent installs all the stove at zero cost and PP does not plan on charging the end users any amount. PP has replaced the IP that charged the amount with another IP ensuring that distribution/installation will remains free of cost.

PP has calculated NPV of the project and provided detailed investment analysis spread sheet sheets to VVB during first verification. Also, Implementation cost and project revenue are mentioned in detail in the section 3.5 of the VCS PD.

The proposed changes does not have any impact on applicability of methodology, appropriateness of the baseline scenario and estimation of emission reductions.”

3.4 Grouped Project

The grouped project (the project) is the dissemination of energy efficient stoves for cooking purposes. A total of 38,610 ICS were disseminated by the end of this monitoring period. The volume of ICS distributed in this period is smaller than ex-ante anticipated in the registered document, resulting in lower emission reductions than anticipated.

Under this grouped project PP has considered each ICS as a project activity instance (PAI) which is deemed acceptable as per the VCS Program Definitions version 4.2/26/ and VCS Standard version 4.3/4/. The eligibility criteria of the Project Activity Instance was established at the group project validation in the VCS PD /14/and revised VCS PD /34/.

- Quality and completeness of evidence, data and documentation relating to the new project activity instances:

The assessment team has reviewed the evidences collected by the PP for each of the PAI included in this verification and confirmed the following;

- Implementation and operational status of the PAI
- Monitoring and data collection
- Flow of information; generating, aggregating and reporting of the monitoring parameters
- Conformance of the new project activity instances with the eligibility criteria set out in the project description:

The verification team assessed the appropriateness of new project activity instances (added to the grouped project) against the requirements of the following key elements defined in section 3.2.11 of the Validation and Verification Manual (version 3.2)/22/:

Table 1 :- Eligibility Criteria for new project activity instances

Key Element	Requirements /B01-c/	VVB Assessment
Geographic Areas	VVBs must ensure that the project description clearly identifies the geographic areas within which new instances may be added. Geographic areas must be defined using geodetic polygons and provided in a KML file. Such geographic areas need not be contiguous and may be large or small, noting the grouped project requirements for additionality and baseline assessments of the geographic area.	The verification team reviewed the sales record database /20/ and by further conducting interviews/21/ with representatives of PP to confirm that all new project activity instances are located within the geographical area identified in the registered VCS PD /14/and revised VCS PD /34/. All new project activity instances are located within the host country of Republic of Kenya. This is deemed appropriate to the verification team. Thus, the requirements of this key element are met.
Identification of baseline	The assessment of baseline scenario and additionality is based upon the initial instances included within each	The verification team reviewed the sales record database /20/, conducted interviews/21/ with representatives of PP and

scenario and demonstration of additionality:	geographic area. VVBs must ensure that, for each project activity, a single baseline scenario exists for each geographic area. VVBs must also ensure for each project activity that additionality is demonstrated across the entirety of each geographic area. Failing this, VVBs must require that the geographic areas are redefined such that the requirements are met. As with projects with multiple instances, project activity instances within a grouped project should be part of the same investment decision if they are to be included in a single project.	further based on its sectoral expertise confirms that baseline scenario for each project technology and geographic area, as identified in section 3.4 of the VCS PD /14/and revised VCS PD /34/, is applicable to the corresponding new project activity instances under the specific technology. In addition, the verification team further confirms that each new project activity instance included within the grouped project follows the additionality. The additionality of the grouped project has been demonstrated by the PP as per the methodology section 7 /6/. PP has calculated NPV of the project and provided detailed investment analysis sheets. Verification team checked all the input values (cash inflow and cash outflow) opted for NPV calculation with their respective evidences/18/ and revised VCS PD /34/ and found to be appropriate. Key cash inflow assumptions have been assessed as follows: Verification team has checked the opted value $ 6.00/ICS (cost include stove metal parts ($) including FOB + transportation to Kenya warehouse) and found conformance with the Quotation received from Ener-G-Africa (Stove parts supplier) dated 01-September-2020. One time cash collected from households (revenue from sale of the bricks for ICS): $ 2.76 (300 Kenyan Shillings for each ICS)and found conformance during the remote audit interview with the end users and the implementing partners. Key cash outflow assumptions are as follows: 1) Implementation/ distribution cost: cost of per ICS is $ 4.50

		contract/agreement with implementing partners. 2) Operation and maintenance cost: cost of per ICS is $ 1.50 contract/agreement with implementing partners. 3) Cost involving software development:- cost involve $ 0.01 contract/agreement with database management company. 4) Cost on account of defective stove/breakdown: cost involve to account for stove failure or malfunction or replacement cost $ 0.30 calculated. Assessment of discount rate considered: Discount rate: Verification team has verified the opted 11.99% risk free rate of return (Government bond rates for 11 years tenure in October 2020) weblink (https://www.centralbank.go.ke/uploads/historical_treasury_bond_results/936702326_RESULTS FXD1-2011-20 FXD1-2018-25 DATED 19.10.2020.pdf) and found appropriate. The financial calculations have been checked and verified and deemed appropriate. It is clearly established that projects has negative NPV without carbon revenues. Furthermore, the verification team has checked that even if the cash outflows corresponding to Distribution cost of ICSs, and revenue from sale of bricks for ICS; are excluded still the NPV remains negative.

		Thus, it has been demonstrated that for each project activity instance included in grouped project • Baseline scenario exists (corresponding to the project technology) • the requirements of additionality are being complied with for the entirety of geographic area (Republic of Kenya) within which they are installed. This is deemed appropriate to the verification team. Thus, the requirements of this key element have been met by all the new project activity instances added to the grouped project.
Eligibility criteria	VVBs must ensure that an appropriate set of eligibility criteria are established for each combination of project activity and geographic area. The criteria are used to validate new project activity instances, essentially serving as a checklist to determine whether the instances share the same attributes as the initial set of validated project activities instances. For example, eligibility criteria for grouped projects implementing CFLs may state that new instances must be installed in grid-connected households and the CFLs must be at least 30 percent more expensive compared to conventional incandescent bulbs. In general, VVBs must ensure that the eligibility criteria are developed sufficiently that such determinations could be made when validating new instances. Eligibility criteria must also conform to any restrictions set out in the methodologies applied.	PP has provided the applicability of each of the eligibility criteria for all the project instances in section 3.3 of the MR /01/ which is in compliance with the VCS PD /14/and revised VCS PD /34/. Based on the assessment provided, the verification team concludes that each new project activity instance meets the appropriate set of eligibility criteria (as defined in VCS PD/14/and revised VCS PD /34/) and thus shares the same attributes as the initial set of validated project activity instances. Thus, the verification team deems them to be appropriate for inclusion in the grouped project. This is deemed appropriate to the verification team. Thus, the requirements of this key element have been met by all the new project activity instances added to the grouped project.

Monitoring and GHG information system	VVBs must ensure that the project has an appropriate monitoring plan that includes a sampling plan to collect data from all project activity instances and information systems, allowing for centralized data collection. VVBs must ensure the sampling plan is able to generate statistically significant results.	The verification team reviewed the VCS MR /01/ and further conducted interviews/21/ with representatives of PP to confirm that the monitoring plan and procedures mentioned therein (which includes the sampling plan) is in conformance to the requirements laid out in the VCS PD /14/ and revised VCS PD /34/, Moreover, according to the monitoring plan the PP is responsible for collecting and storing data. The verification team further confirms that new project activity instances will conform to the monitoring plan requirements and procedures stated therein. However, as per specific requirements of the applied methodologies VMR0006 version 1.1/6/, sampling for monitoring the project under methodologies has taken place during the current monitoring period. Based on the review of the applied methodologies/6/ and VCS PD/14/and revised VCS PD /34/ this is deemed to be acceptable to the verification team. Refer to section 4.1 below for detailed discussion on monitoring activities. This is deemed appropriate to the verification team. Thus, the requirements of this key element have been met by all the new project activity instances added to the grouped project.
Methodology	Grouped projects can apply methodologies other than those designed specifically for grouped projects. When reviewing the methodology and the project's application of it, VVBs must be mindful of any capacity limits applicable to the methodology. VVBs need only ensure that project activity instances and clusters adhere to such capacity limits; the grouped project as a whole may exceed the capacity limit.	The verification team reviewed the MR /01/, sample end user agreements for new project activity instances, and further conducted interviews with representatives of PP to confirm that all new project activity instances comply with the requirements of their respective applied methodologies /06/. Furthermore, it is confirmed that no methodologies other than those designed specifically for grouped projects have been applied. Moreover, all new project activity

		instances comply with the respective capacity limits as per the applied methodologies. This is deemed appropriate to the verification team. Thus, the requirements of this key element have been met by all the new project activity instances added to the grouped project.

Based on the above assessment the verification team confirms that inclusion of project activity instances in the grouped project is valid.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

As verified from on-site assessment and monitoring results of PP, the audit team confirms the project implementation and operation complies with the project design document/14/ and /34/. The purpose of the project is to disseminate efficient, improved cooking stoves (ICS) in rural households of Kenya. The improvement in thermal efficiency is achieved by properly designing the dimensions of the combustion chamber and ensuring effective air flow during cooking. The baseline cooking practice in Kenya is the use of the open fire cooking, popularly known as conventional method using firewood. The project thus reduces greenhouse gas (GHG) emissions by replacing traditional wood-fuel by wood-fuel ICS. The replacement of conventional method by ICS improves heat transfer to the cooking utensil thereby reducing the amount of fuel (non-renewable biomass) required for cooking.

A reduction in consumption of non-renewable biomass contributes towards reduction in GHG emissions into the atmosphere. Thus, ICS reduce GHG emissions through their improved thermal efficiency as compared to traditional/baseline stoves. This project is implemented by CQC/15//18//19//20/. Users transfer the ownership of carbon credit via end user agreement/7/. The operational and management structured is verified from document review and on-site interview.

The verification team confirms that during the current monitoring period i.e.,01-September-2021 to 28-February-2022 (inclusive of both the dates) the VCS grouped project has disseminated 33,868 ICS in Kenya/17/. The first stove was installed on 06-October-2020 and is also verified from project database/02/ and validation report/12/ and found to be accurate. The ICS promoted under the project have 10 years technical life /09/ and initial tested efficiency of ICS was 34.5 %. This was further confirmed by the verification team by the TLC Brochure/9/ submitted by the PP. During this 2nd monitoring period operational status of total 38,610 ICS were taken into consideration and monitoring survey confirmed a 100% operational rate between 01-September-2021 to 28-February-2022(both dates included)/02/. The operational rate was further confirmed by section 9.2 of applied methodology, “Number of project devices of type i and batch j operating during year y ($N_{y,i,j}$)can be measured directly or based on representative sample.”

PP had conducted second monitoring survey during the period of 23-May-2022 to 17-June-2022 (inclusive of both the dates) in Kenya. During the survey it was found that 100% project devices are in operation, and this was further confirmed by the VVB from the submitted sampling spreadsheet /15/by PP.

So, to measure Ny,i,j, PP multiplied the achieved proportion with commissioned stoves that is 100% x 38,610= 38,610

During the interviews/30/ verification, QA/QC procedures were identified which demonstrate that:

Operational and management system of the grouped project is in place; data were centralized; monitoring data were crosschecked with the sales records stored and confirmation that all operational staff were trained before taking up positions/18/. 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 PD. The registered VCS PD/14/and revised VCS PD /34/ clearly describes the monitoring and responsibility of monitoring is done by PP.

VKU verification team verified 22 ICS 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/30/, each cook-stove has unique identification number (ID) which has been provided in the end user agreement/7/ and are correct as per project database/17/. Along with the serial number, the stove model, end user name, address, installation date etc. had also been noted which were found to be consistent on ground during the site visit.

It is noted that no changes have been observed or identified 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 1.1/6/.

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.

Data parameters fixed ex-ante and available at validation are given below:

S.No.	Data/parameter	Unit	Value applied	Assessment
1	Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass (f_{NRBy})	Fraction	0.94	The value has been calculated in accordance with Tool 30 version 3/21/; using latest available versions of Food and Agriculture Organization (FAO) report, UN Data and other publicly available data that have been published by reliable sources. The value is fixed as per registered PD/14/and revised VCS PD /34/ for the entire crediting period.
2	Net calorific value of the non-renewable woody biomass that	TJ/tonne	0.0156	It is IPCC default value verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories/27/; Volume 2

	is substituted or reduced ($NCV_{wood\ fuel}$)			Energy, Chapter 1 Introduction. Further, this is a default value as stated in the VMR0006 Methodology, version 1.1/06/.
3	CO2 emission factor for the use of wood fuel in baseline scenario ($EF_{wf,CO2}$)	tCO2/TJ	112	It is an IPCC default value verified from 2006 IPCC Guidelines for National Greenhouse Gas Inventories/27/; Volume 2 Energy, Chapter 2 Stationary combustion. The value is fixed as per registered PD/14/and revised VCS PD /34/ for the entire crediting period.
4	Non-CO2 emission factor for the use of wood fuel in baseline scenario ($EF_{wf,non\ CO2}$)	tCO2/TJ	26.23	It is IPCC default value from 2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion. This value is fixed ex-ante during validation /12/
5	Efficiency of baseline cookstov(η_{old})	Fraction	0.1	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. Further, this is a default value as stated in the VMR0006 Methodology, version 1.1/06/.
6	Efficiency of project stove at the start of project activity(η_p)	Fraction	0.3211	As per manufacturer specification/09/. Consistent with the registered PD /14/and revised VCS PD /34/. This has been validated during registration as well /12/.

Data and parameters monitored:

S.No.	Parameter	Value	Description/Assessment
1	Number of project devices of type i and age a that are operating in year y $N_{y,i,i}$	38,610	From the total commissioned ICS, PP has conducted the sample survey/15/ in line with monitoring plan and sampling and survey guidelines/10/ covering 48 samples which were found 100% operational by the PP/1//2/. According to the

			section 9.2 of applied methodology, "Number of project devices of type i and batch j operating during year y ($N_{y,i,j}$)can be measured directly or based on representative sample." PP had conducted second monitoring survey during the period of 23-May-2022 to 17-June-2022 in Kenya. During the survey it was found that 100% project devices are in operation, and this was further confirmed by the VVB from the submitted sampling spreadsheet /15/by PP. So, to measure $N_{y,i,j}$ PP multiplied the achieved proportion with commissioned stoves that is 100% x 38,610= 38,610 During the site visit/21/, VKU confirmed with the household/end user whether or not the PP has performedmonitoring/measurement campaign/20/, survey on stove operation (for the parameter $N_{,y,i,j}$).The verification team also assessed Competence of personnel involved in conducting/12/.Hence, VKU verification team verified taking 22 ICS samples and all samples were found operational. Hence reported results are accepted.
2	Efficiency of the improved cookstove type i and batch j during year *y* ($\eta_{new,i,j}$)	For Vintage 1: 32.43% For Vintage 2: 32.11 %	This parameter has been calculated using equation 5 of the applied methodology/06/. The applied efficiency is correct as per the methodology requirement and registered PD /14/ and revised VCS PD /34/hence accepted.
3	Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey.$B_{y=1,new,i,j,survey}$	1.1352	In accordance with the applied methodology and validated registered PD /14/ and revised VCS PD /34/, the parameters is determined during the first verification and fixed for the remaining crediting period. The determination and calculation of this parameter is not under the scope of current verification. However, the assessment team;

			- Has verified sampling and calculation sheet of Monitoring Period 1/31/ for determination of wood consumption for checking the consistency of values used - Confirms it was demonstrated that the consumption of biomass for individual project stoves can be measured exclusive of one another (for two pot stoves) - Confirms that PP has used the value which was verified by VVB during the Monitoring Period 1 and accepted by Verra through issuance of Monitoring Period 1 Verification Report/13/.
4	Life Span	10 years	As per manufacturer specification/09/. Value was fixed once at the time of project stove installation. It is consistent with the registered PD /14/and revised VCS PD /34/.

Assessment team concludes the following:

- There is no material discrepancies between project implementation and the project description found in current monitoring period. However one project description deviation is raised and verified in previous verification period/30/ which is further cross checked from the registered VCS PD /14/ and revised VCS PD/34/.
- The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters) is appropriate.
- There is no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology/6/.
- The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification /19/.
- The GHG emission reductions or removals generated by the project have not been included in any emissions trading program or any other mechanism that includes GHG allowance trading/19/.
- The project activity complies with four indicators for sustainable development i.e., social wellbeing, economic wellbeing, environmental wellbeing and technological wellbeing, in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India as discussed under section 1.11 of MR /1/. Assessment team has verified the same during on site visit /19/ and found all the indictors to be effective and applicable for the project activity.

4.2 Safeguards

4.2.1 No Net Harm

The project involves use of improved cooking stove in households replacing conventional cooking stoves. Therefore, the project results in avoidance of CO_2 emissions due to improvement in efficiency as verified from the manufacturer's specification/09/. Therefore, there is no negative environmental impact from the project activity. In addition, due to the project activity, jobs are created on local level as verified during on-site interview/21/ which has improved socio-economic impacts in the project area. The project is neither involved in any activity that would bring environmental deterioration nor will lead to any emission of toxic substances.The project stoves will rather reduce emissions due to the increased thermal efficiency compared to the baseline stoves.

The amount that was charged from HH for 2000 ICS, is a very small amount and has not affected the end user much since it is also a onetime payment. PP has also replaced the IP that charged the amount with another IP ensuring that distribution/installation will remains free of cost.Therefore, there is no net harm from the project activity.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation is not applicable for the project proponent during verification. PP organized stakeholder consultation during validation/12/ of the project activity which was validated by the validation agency. Athough a regular grievance redressal mechnism is established by PP which is accessible by end users as phone number of the PP/implementing partner office in Kenya is available on the brochure /35/ provided to each household, which is the most accessible manner to provide feedback.PP policy and procedure outline the process to evaluate and respond to complaints; the procedure details when a serious level complaint should be communicated to PP country teams and when it would be best addressed by the implementing partner.The verification team has interacted with local stakeholders during on-site assessment/21/ and details are summarized in section 2.3 of this report. There were some negative feedback received from local stakeholders as recorded by the verification team which were addressed by PP satisfactorily.

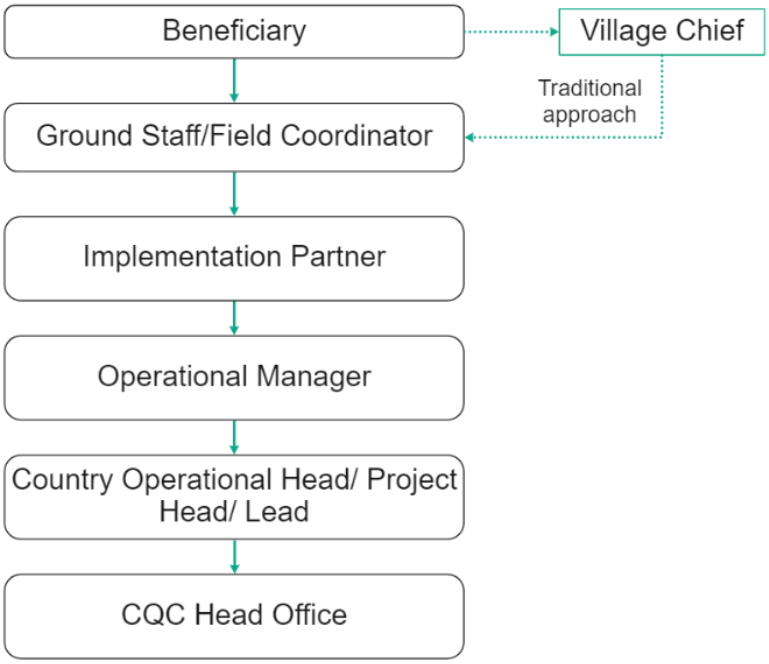
Grievance Received	Action Taken
Too much heat.	End user was using excess amount of firewood to prepare their food. Field officer visited the household and sensitized to use less firewood especially small twigs and branches.

Project Stove is too smoky.	End user was using bigger logs to prepare their food, choking the flow of oxygen level in the combustion chamber leading to increased smoke. Field officer visited the household and sensitized to use small twigs and branches instead of bigger logs as well as to avoid using wet wood for the preparation of food.
Difficult to prepare fuel	End user has been cutting tree to make wood logs for preparing firewood. Field officer visited the household and sensitized to use small twigs and branches collected from the fields and nearby areas instead of cutting tree.

The local implementation partners as well as PP have the responsibility to take grievances regarding the project activity and same will be conveyed to PP during operation of project activity. Thus, ongoing communication of stakeholders is followed through grievance mechanism.

The Project Proponent has reported its feedback and grievance redressal procedure in Section 2.2 of the MR /1/, and the policy is outlined in the document "Project Grievance Redress Mechanism" /17/. In the opinion of assessment team, based on interviews/30/ and observations, the grievance redressal procedure will address issues that may arise during project planning and implementation. The grievance redressal process has been designed where beneficiaries and stakeholders have PP contact information and the understanding that they should contact the organization with any problems, questions, or grievances.

As per VCS PD /14/and revised VCS PD /34/ and further confirmed during interviews/30/, the end-users have a provision to approach PP through their village chief. The village chief then reports the concerns to the concerned person, i.e., field staff from PP who takes it further and resolves the issue. In the opinion of VVB, this would protect the traditional sentiments and value system of the villages and help them express their issues without any hesitation and deemed appropriate to the VVB. The typical diagram of this grievance addressal mechanism is mentioned in the section 2.2 of the MR /1/. During the interviews/30/ and based on document review /15/, it can be confirmed that grievance addressal procedure that has been designed and is implemented according to section 2.2 of the MR /1/ and that it is effective in its aim.



Flow of information/complaint/grievances from stakeholder to PP

The verification team confirms on the procedure and method for engagement, method for documenting the outcomes of local stakeholders' consultation and account of all inputs received. The verification team confirms that the project proponent has taken due account of all input/ feedback received during the monitoring process (positive or negative) have been compiled in the survey results spreadsheet/15/, this has been checked by the verification team during the onsite interviews/30/. Hence the verification team found the local stakeholders ongoing communication as appropriate.

4.3 AFOLU-Specific Safeguards

The project is a non-AFOLU projects, this section is not required.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The equations and choices provided in the methodology/06/ and all other methodological tools are correctly quoted in the MR/01/. The emission reductions of the project instances of the grouped project and project activity instance are calculated using the formulae mentioned in the applied methodologies; VMR0006 version 1.1/06/. The verification team has reviewed the emission reduction spread sheets (ER sheets)/02/ and checked all the formulae and found they are correct

and are in accordance with the monitoring plan of the PD/14/and revised VCS PD /34/ and the applied monitoring methodology/06/.

According to applied methodology VMR0006 (version 1.1) /06/the emissions are calculated as below:

Baseline Emission:

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

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_2e
$ER_{y,i,j}$	=	Emission reductions by improved cookstove of type i and batch j during year y in t CO_2e

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times f_{NRB,y} \times \left(EF_{wf,CO2} + EF_{wf,non\ CO2}\right) \times N_{y,i,j} \times 0.95$$ Equation (2)

Where:

$B_{y,savings,i,j}$	=	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)[1]
$EF_{wf,CO2}$	=	CO_2 emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO_2/TJ)[2]
$EF_{wf,non\ CO2}$	=	Non-CO_2 emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO_2/TJ)[3]
$N_{y,i,j}$	=	Number of improved cookstoves of type i and batch j operating during year y

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

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

[3]2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion

0.95	=	Discount factor to account for leakage

To calculate $B_{y,savingsi,j}$, we useequation 4 of the applied methodology[4]

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

Where:

$B_{y=1,new,i,survey}$	Annual quantity of woody biomass used by improved cook stoves in tonnes, determined in the first year of the implementation of the project through a sample survey
η_{old}	Efficiency of baseline cookstove. A default value of 0.10 has been used as 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 improved cook stove determined using Equation 5 of the methodology.

$$\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94$$

Where:

η_p	Efficiency of project stove (fraction) at the start of project activity
$(DF_n)^{y-1}$	Discount factor to account for efficiency loss of project cookstove per year of operation (fraction). default value of 0.99 efficiency loss per year has considered for the project activity
0.94	Adjustment factor to account for uncertainty related to project cookstove efficiency test

Leakage Emissions: In accordance with methodology VMR0006 version 1.1/6/, leakage is considered as default 0.95.

Sampling approach: -

As assessed in this section, emission reductions for the project "Installation of high efficiency wood burning cookstoves in Kenya" has being claimed for this monitoring period and the total population

[4]Equation 3 of methodology VMR0006, version 1.1

of the stoves for the current monitoring period (01-September-2021 to 28-February-2022) is 33,868 ICS.

The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology /06/, VCS PD /14/and revised VCS PD /34/. The CME has appropriately performed Simple random Sampling procedure, reliability levels were set at 90% confidence and 10% precision in line with the applied methodology VMR0006 version 1.1/06/. As per the VCS PD /14/ mentions the option for Simple random Sampling procedure, it is acceptable to the verification team.

The sampling surveys have been carried out by the well-trained personnel /15/. Monitoring parameters Ny,i,j and By=1,new,i,j,survey are monitored through monitoring sample surveys. Monitoring of the parameters ensures compliance with the applied methodology VMR0006, version 1.1 /06/. Verification team has checked the survey records /15//18/ and sample size calculation/10/. Parameter Ny,i,j monitors the number of stove in operation.

PP has provided the detailed sample size calculation under section 4.3 of the MR/1/.

Definition	Value	Justification
The population size N is	38,610	Number of stoves registered in database
The expected proportion p for ny,i is	0.85	A conservative assumption of 85% is applied for sample size calculation.
Sample size	47.70	
Sample size (rounded up)	48	
Total samples selected short listed	69	Including 30% non-response

$$n \geq \frac{1.645^2 \times 38{,}610 \times 0.85(1-0.85)}{(38{,}610-1) \times 0.1^2 \times 0.85^2 + 1.645^2 \times 0.85(1-0.85)} = 47.70$$

However, as per the sampling Guideline: Sampling and surveys for CDM project activities and programmes of activities version 04 /10/ , Appendix 2, § 3.1

Retention rate of improved cookstove (proportion parameter) –

“The required sample size for this parameter is dependent on:

(a) The expected value of the proportion parameter;

(b) The level of precision and confidence in that precision (90/10 reliability criterion).

Based on similar studies done in the region, it is thought that this proportion is 0.85 (85%) during this monitoring period. Since the PAIs are assumed to be homogeneous with respect to the retention rate of improved cookstove.”

In the registered VCS-PD /14/and revised VCS PD /34/, section 5.3, the expected proportion value was assumed to be 0.8 expecting that the 80% of the ICS still in operation (was just an example to show how PP will calculate the sample size using the formula mentioned in VCS-PD). During this MP

verification, 0.85 has been chosen as proportional parameter by PP, considering 85% of ICS will be operational.The confidence /precision level is 90/10 but PP has taken the assumption of 85% as a more conservative approach as PP is assuming only 85% ICS to be operational, although as found from the actual sampling survey conducted by the PP,100% ICS were operational. Hence, the rejection level is under 10%. Sample size, thus arrived, meets the relative precision errori.e., under 10%. However, actual proportion of ICS in operation is observed as 100% during the 1st MP verification and the 2nd MP verification as well, which shows that considering 0.85 as expected proportion is conservative.

According to the section 9.2 of applied methodology, "Number of project devices of type i and batch j operating during year y ($N_{y,i,j}$)can be measured directly or based on representative sample."

PP had conducted second monitoring survey during the period of 23-May-2022 to 17-June-2022 (both dates inclusive) in Kenya. During the survey it was found that 100% project devices are in operational, and this was further confirmed by the VVB from the submitted survey spreadsheet/15/.Assessment team conducted acceptance by taking sample from the samples taken by the PP, mentioned in the sampling and survey sheet/15/ submitted by the PP.

So, to measure $N_{y,i,j}$PP multiplied the achieved proportion with commissioned stoves that is 100% x 38,610= 38,610

Hence, the verification team in line with the sampling guideline /10/ and PD /14//34/ found the sampling approach conservative and appropriate, based on the provisions of the sampling guideline and the same has been updated in section 4.4 of the FVR.

The resultant applied sample size by the PP are summarized below :

Parameters	$N_{,y,i,j}$
Sample size	48
Precision achieved	0.00%

VVB used acceptance sampling during verification for checking the operational status in the households. The sampling done by VVB reflects the population of the project activity. Applying paragraph 39 (c) of the sampling standard, version 09 /11/, a sample size of 22 ICS were chosen (with no discrepant records). A sample size of 22 was determined, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%The Producer risk and consumer risk were chosen at 10% as the confidence/precision level was set at 90/10. Acceptance number (c) thus determined for the sample is 0.5 in line with para 30 and 31 of "Sampling and Surveys for CDM project activities and programme of activities" version 09.0. VVB interviewed 11 households for 22 ICS samples (each, for monitoring survey).It was observed that out of the 22 ICS samples, all the 22 ICS were found to be operational and this matched with the PP's records and hence no discrepant records were observed with the MR /01/ and ER sheet /02/ and thus c=0. Thus, PP's set of records has been accepted in line with para 33 of the sampling standard, version 09 /11/. Verification team has cross verified these sample documents.

The monitoring parameters to be monitored through the sampling plan is:

1. Number of project devices operating during year y ($N_{y,J,j}$)

Simple random sampling was applied by the PP for selection of the monitoring samples with 90/10 confidence/precision for determining the sampling for all the parameters which is deemed acceptable as per the VCS PD /14/and revised VCS PD /34/.

Furthermore, the database /19/ and sample sales invoice /20/ was also checked/cross verified to confirm the number cookstove for the parameter N,y,i,j.

As per paragraph 25 of the Sampling Standard, version 09 /11/, the verification team has to verify whether the project participants entity have implemented the sampling and surveys according to the sampling plan in the registered monitoring plan. The verification includes determining:

(a) Whether the required confidence/precision has been met;

(b) Whether the selected sample was representative of the population.

As per the applied methodology VMR0006 version 01.1 section 9.2 /06/,registered VCS PD /14/and revised VCS PD /34/ the necessary confidence / precision of 90/10 for the parameters have been met. This has been cross verified by the verification team from the supporting documents submitted/15/.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 01.1 /06/, VCS PD /14/and revised VCS PD /34/. 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 calculation of GHG emission reductions have been thoroughly checked by the verification team and was found appropriate and correct.

The full set of emission reductions calculation are provided in Excel spread sheets/02/. ER_y realized during the current monitoring period are 35,244 tCO_2e which are 46.29% less than the estimated emission reduction i.e., 76,126tCO_2e for the current monitoring period due to By savings value considered during the validation was 1.83 tonnes/device/year whereas the actual value during verification was found to be 1.1352 tonnes/device/year and it can be verified from the MR/1/ and ER spreadsheet/2/ provided by PP and completely assessed by the verification team as stated above.

The verification team has checked and confirmed the calculations in the spreadsheet and found to be accurate. The monitoring report/1/ is supported by emission reduction spreadsheet/2/. The consistency and formula were verified and found to be accurate.

4.5 Quality of Evidence to Determine GHG Emission 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 validate 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/1/, 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 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/10/ follows 90/10 confidence precision. The survey forms/15/ and photographs were checked to ascertain the monitoring results reported in survey/15/. For enhancing the survey reliability and QA/QC, training has been provided to the data collector during survey /15/ which was further verified from the training details provided by the PP/18/. It is also noted the achieved precision is less than 10% and hence meets the desired confidence precision /10/. The monitored results are found consistent with on-site audits.

Also, project developer has set up grievance/repair/maintenance mechanisms/18/ and rectifies any issues for the operation of the project device. So, 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 line with the applicable VCS requirements.

The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified. The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed.

The assumptions, emission factors and default values that were applied in the calculations are justified. The actual emission reduction achieved during the current monitoring period are 46.29% lower than the estimated amount of emission reductions as per VCS PD /14/and revised VCS PD /34/, which is due to different By savings value considered during the validation was 1.83 tonnes/device/year whereas the actual value during verification was found to be 1.1352 tonnes/device/year and it can be verified from the MR/1/ and ER spreadsheet/2/ provided by PP and completely assessed by the verification team as stated above. This comparison is submitted in the ER sheet along with a justification confirming that this event of lower power generation is as per the methodology /06/. Since the emission reduction is less than the estimated emission reduction, no further justification is required.

All the data were made available and have been monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above.

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/4/.

4.6 Non-Permanence Risk Analysis

There is no non-permanence risk rating determined by the project proponent.

5 VERIFICATION CONCLUSION

VKU Certification Pvt. Ltd. has performed second verification of the emission reductions reported for the project activity "Installation of high efficiency wood burning cookstoves in Kenya", VCS Registry Project ID 2349, for the monitoring period 01-September-2021 to 28-February-2022(both dates included), with regard to the relevant requirements for VCS activities. The project proponent of the "Installation of high efficiency wood burning cookstoves in Kenya" project is responsible for:

- The preparation of greenhouses 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 project design document version 03.1 of 22-Feburary-2022/14/ and version 4.0 of 21-October-2022 /34/.
- 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 4.3/04/ and GHG program applied, on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and corroborated by an on-site assessment, VKU can confirm that:

- the project has been implemented and operated as per the registered VCS-PD/14/and revised VCS PD /34/;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard version 4.3 requirements/4/;
- the monitoring is in place as per the applied baseline and monitoring methodology/06/;
- the monitoring plan in the registered VCS-PD/14/and revised VCS PD /34/ is as per the applied baseline and monitoring methodology.

It is VKU's opinion that the GHG emission reduction stated in the monitoring report version 1.1 of 21-October-2022/01/ for the "Installation of high efficiency wood burning cookstoves in Kenya" for the monitoring period 01-September-2021 to 28-February-2022(both dates included) are fairly stated.The GHG emission reductions are calculated on the basis of approved methodology VMR0006 version 1.1/6/ and the monitoring plan included in the registered Project Design Document, version 3.1 of 22-Feburary-2022 /14/ and revised PD version 4.0 of 21-October-2022 /34/.

Hence VKU is able to certify that the emission reduction from the project during the monitoring period 01-September-2021 to 28-February-2022 (inclusive of both the dates) amounts to 35,244 tCO_2e.

Verification period: From 01-September-2021 to 28-February-2022(both dates included):

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)[5]	Net GHG emission reductions or removals (tCO_2e)
Year 2021 (01-September-2021 to31-December-2021)	15,931	0	0	15,931
Year 2022 (01-January-2022 to28-February-2022)	19,313	0	0	19,313
Total	**35,244**	**0**	**0**	**35,244**

[5]The leakage is considered using the factor 0.95 while calculating baseline emission in-line with the registered PD and hence leakage amount is taken as zero in the table.

APPENDIX A: ABBREVIATIONS

Abbreviations	Full texts
ARC	Aprovecho Research Center
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CL	Clarification Request
CO2	Carbon dioxide
CO2e	Carbon dioxide equivalent
DNA	Designated National Authority
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MoV	Means of Verification
MR	Monitoring Report
PDD	Project Design Document
PP(s)	Project Proponent(s)
Ref.	Document Reference
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCU	Verified Carbon Unit
VKU	VKU Certification Ltd.
VVS	Validation and Verification Standard
VVB	Validation and verification body

APPENDIX B: AUDIT FINDINGS

Type			Date	02-10-2022
CL#01			Reference	Section of Ver protocol: MR
Description of the Non Conformance				
1. PP is requested to provide the cookstove installation certificate/ end user agreement to verify the project start date. 2. PP is requested to provide the monitoring survey report conducted by PP to calculate the number of total ICS distributed in current monitoring period 3. PP is requested to provide some proof of employment generated due to implementation of the project activity in republic of Kenya in section 1.11 4. PP is requested to provide some sample feedback form to VVB to verify that there is no grievance found in current monitoring period in section 2.2. 5. PP is requested to provide a supporting document such as log book or screenshot of any database if maintained for no grievances found in the current monitoring period from stakeholders in section 2.2.				
1st Response from PP			**Date**	21-10-2022
1. PP would like to confirm that06-October-2020 (date of commissioning of 1st ICS under this grouped project activity) is the start date of the project and End user Agreement is being submitted to confirms the same. 2. PP is being submitted the monitoring survey report to VVB. 3. PP is being submitted the employment details 4. PP follows a proper complaints/Grievances Redressal Policy and Procedure, which ensures that individual stakeholders' complaints/grievances are properly prioritized and addressed. PP incorporated the grievances received in the MR v1.1. **5.** PP follows a proper complaints/Grievances Redressal Policy and Procedure. The Grievance Policy and Procedure is accessible as a phone number of the PP/implementing partner office in Kenya is available on the brochure provided to each household, which is the most accessible manner to provide feedback. PP/IP co-ordinate with the field staff of the particular location to address the complaints.				
1st Assessment by Audit Team	**Status**	Closed	**Date**	02-11-2022
Assessment team confirms that PP has submitted the following documents: a. End User Agreement of the first cookstove installed b. Monitoring survey report c. Employment details d. Sampling survey sheet which also illustrates the grievances The documents submitted are found to be consistent. Hence accepted. The grievance Redressal Policy and Procedure is verified on site by Verification team and same is now properly addressed in the revised MR version 1.1 dated 21-October-2022. Hence Accepted.				

CL#01 is Closed

Type		Date	02-10-2022
CAR#01		Reference	Section of Ver protocol: MR
Description of the Non Conformance			
1. PP is requested to update the font size as per VCS MR Template version 4.1. 2. PP is requested to provide the reference link for the tool and standard referred in section 1.8 3. PP is requested to follow Monitoring Report Template V4.1 and add Table 1: Sustainable Development Contributions in section 1.11. According to the guideline mentioned here, the project should be registered since the project is seeking to be registered thus it is mandatory to insert the table.			
1st Response from PP		**Date**	21-10-2022
1. PP is being revised the font size as per VCS MR Template version 4.1. 2. PP is now being incorporated the reference link for, *a*. Tool 30 version 3.0 – "calculation of the fraction of non-renewable biomass".(Version 3.0)[6] b. Standard – "Sampling and Surveys for CDM project activities and programmes of activities" (Version 09.0)[7] 3. As per the Monitoring Report Template v4.1 PP has to provide the Sustainable Development Contributions.In accordance with Paragraph 3.17.1 of VCS Standard, version 4.3, "Where project complete a validation or verification to the SD VISta Program at the same time as a VCS Program validation or verification, they are not required to conduct a separate demonstration of compliance with the requirements set out in this Section 3.17" The project is listed under SD VISta and is under public comment period[8]. Therefore, details of SDGs claimed is not required to be mentioned in VCS MR. Same has been mentioned in section 1.11 of the MR. PP would like to submit the SD VISta PD for the reference of the VVB.			
1st Assessment by Audit Team	**Status**	Closed	**Date**	02-11-2022

[6] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v4.0.pdf/history_view

[7] https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210531160756223/Meth_Stan05.pdf

[8] Verra Search Page

1. Assessment team confirms that PP has updated the font size in the revised MR version 1.1 dated 21-October-2022
2. Assessment team confirms that PP has incorporated the links of tool and standard in the revised MR version 1.1 dated 21-October-2022
3. Assessment team confirms since the project is listed under SD-Vista and is under public comment period as can be verified from the project webpage thus SDG Contribution table need not to be filled.

Hence Accepted, CAR#01 is Closed

Type			Date	02-10-2022
CAR#02			Reference	Section of Ver protocol: MR
Description of the Non Conformance				
1. PP is requested to enlist the cookstoves distributed in 4 project areas as specified in section 1.7 of this MR in section 3.1 2. As discussed during site visit PP is requested to update the spot check mechanism and include the frequency and planning of spot check mechanism and provide evidence for the spot check mechanism happened in the current monitoring period in section 4.3 3. As discussed during site visit PP is requested to update the organization flow chart along with the roles and responsibilities assigned to each member in section 4.3				
1st Response from PP			**Date**	21-10-2022
1. PP would like to clarify that Kenya was divided into four provinces for a more organized implementation of the project. The implementation details of the four provinces of Kenya are readily available in the database. 2. PP has a procedure for internal auditing called spot-checking, where field staff randomly selects households to ensure proper functioning of the project stoves throughout the project lifetime and to ensure that the project stoves continue to work as efficient as specified by the manufacturer. Field staff of project proponent randomly select units included in the database and visit or contact the stove owners to cross-check the information on the database with the factual evidence in the field. Any inconsistencies found (e.g., change in the address of a user) gets updated on the database, and in case, ICS are found to be no longer in use, they get clearly marked as such and is excluded from emission reductions calculations. Spot check report for the current monitoring period being submitted to VVB 3. PP is now being updated the roles and responsibilities and organizational structure in the section 4.3 of MR v1.1.				
1st Assessment by Audit Team	**Status**	Closed	**Date**	02-11-2022

1. Assessment team confirms that PP has provided the database of cookstove distribution to VVB and all the 4project areas database is readily available there. Hence accepted.
2. Assessment team confirms that PP has provided enough justification to prove the implementation of spot check mechanism in the current monitoring period and also provided spot check sample reports. Hence accepted.
3. Assessment team confirms that PP has updated the organization flow chart along with the roles and responsibilities assigned to each member in section 4.3 in the revised MR version 1.1 dated 21-October-2022. Hence accepted.

CAR#02 is Closed

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

APPENDIX C: COMPETENCE STATEMENTS

Team Leader:

Certification Pvt. Ltd. VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Vivek Kumar Ahirwar
Nationality	Indian
Countries of Experience	India, Madagascar, Thailand, Indonesia, Bangladesh, Nepal, Ghana, Uganda, Kenya etc
Education Qualification	B.E. (Mechanical Engineering) M. Tech (Energy Management)
Year of Experience	10 Years +
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	TA 1.1 - Thermal energy generation and Renewables TA 2.1 - Process GHG Emission Expert TA 6.1 - Solid waste and wastewater TA 6.2 - Manure

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (1.1, 2.1, 6.1, 6.2)	YES

Reviewed by	Vikas Kumar Aharwal (Director)	**Date**	05/09/2020
Approved by	Vikas Kumar Aharwal (Director)	**Date**	09/09/2020

Validator/Verifier-Trainee:-



Certification Pvt. Ltd. VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Shivani Chauhan
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. (Environmental Science) M.Sc. (Environmental Science)
Year of Experience	2 years as Intern
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	NA

Roles

Team Leader	NO
Validator	NO
Verifier - Trainee	YES
Financial Expert	NO
Technical Reviewer	NO
TA Expert	NO

Reviewed by	Ayushi Garg (Quality Manager)	**Date**	11/07/2022
Approved by	Vivek Kumar Ahirwar (Technical Manager)	**Date**	12/07/2022

Technical Reviewer:

Certification Pvt. Ltd. VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Abhishek Kumar Srivastava
Nationality	India
Countries of Experience	India, Uganda
Education Qualification	M. Tech- Energy Management M. Sc. -Physics
Year of Experience	14 Years
Area of Expertise	Climate Change & Environment / Industry
Eligible Sectoral Scope	1. GHG emission reductions from fuel combustion

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (TA1.1, TA1.2 and TA3.1)	YES

Reviewed by	Ayushi Garg (Quality Manager)	Date	25/04/2022
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	26/04/2022