



INSTALLATION OF HIGH EFFICIENCY WOOD BURNING COOKSTOVES IN ZIMBABWE

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Summary:

- A brief description of the verification and the project**

Verification: Carbon Check (India) Private Ltd. (CC IPL) has been contracted by C-Quest Capital Stoves Asia Limited, the project proponent, to carry out the verification of voluntary greenhouse gas emission reductions generated by the Project Activity Instances, under the grouped project “Installation of high efficiency wood burning cookstoves in Zimbabwe”. The verification is based on the desk review of the Monitoring report /01/, VCS PD and the corresponding validation report /15/, supporting emission reduction calculation spread sheets /02/ and other relevant supporting documents made available to the verification team by the project proponent accompanied by remote interviews. This verification involves the period of 29-November-2020 to 31-August-2021 (including both the days).

Project: The project “Installation of high efficiency wood burning cookstoves in Zimbabwe”, is a grouped project which employs VCS methodology; VMR0006 version 1.1 /B02/. The project involves distribution/construction of fuel-efficient stoves in Republic of Zimbabwe. The project results in reducing the amount of non-renewable biomass used for cooking. Through reduction in non-renewable biomass consumption, the programme will decrease greenhouse gas emissions.

- The purpose and scope of verification**

Purpose: The purpose of the verification is to review the monitoring results 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. In particular, monitoring plan, monitoring report and the project’s compliance with relevant VCS, UNFCCC and host party criteria are verified in

order to confirm that the project has been implemented in accordance with previously registered design and conservative assumptions, as documented.

Scope: The scope of the verification is:

- To verify the project implementation and operation with respect to the registered VCS PD.
- To verify the implemented monitoring plan with the registered VCS PD and applied baseline and monitoring methodology.
- To verify that the 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 method and criteria used for verification**

- (a) Desk review, involving:

- (i) Review of the data and information presented to verify their completeness;
 - (ii) Review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
 - (iii) Evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

- (b) Remote assessment involving:

- (i) Assessment of the implementation and operation of the proposed VCS grouped project activity as per the registered VCS PD;
 - (ii) Review of information flows for generating, aggregating and reporting the monitoring parameters;
 - (iii) Interview with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the VCS PD;
 - (iv) A cross-check between information provided in the monitoring report and data from other sources such as inventories, purchase records, or similar data sources;
 - (v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the VCS PD and the selected methodology;
 - (vi) Review of calculations and assumptions made in determining the GHG data and emission reductions;
 - (vii) Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

- **The number of findings raised during verification**

A risk based approach has been followed to perform this verification. During the course of verification, a total of 03 findings were raised, which includes:

01 Corrective Action Request (CAR); 02 Clarification Requests (CLs);

All the raised findings were successfully resolved by the PP.

- **Any uncertainties associated with the verification**

The VCS MR /01/, emissions reduction calculations /02/ along with the supporting documents provided are considered to be in line with all the VCS requirements /B01/. The verification team has detected no further uncertainties or quality restriction.

- **Summary of the verification conclusion**

In CCIPL's opinion, the emission reductions reported for the "Installation of high efficiency wood burning cookstoves in Zimbabwe" in the monitoring report are fairly and correctly stated. CCIPL is therefore able to certify that the emission reductions from the "Installation of high efficiency wood burning cookstoves in Zimbabwe" during the period from 29-November-2020 to 31-August-2021, is amount 36,701 tCO₂ equivalent.

CC IPL VVBs not assume any responsibility towards the issuance and utilisation of VCU's hereby verified and certified. Request for issuance of VCU's shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration. The verification of reported emission reductions is based on the information made available to CCIPL and the engagement conditions detailed in this report. Hence, CCIPL cannot be held liable by any party for decisions made or not made based on this report.

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1 INTRODUCTION

1.1 Objective

Carbon Check (India) Private Ltd. (CC IPL) has been contracted by C-Quest Capital Stoves Asia Limited, the Project Proponent (PP), to undertake the verification of the project titled “Installation of high efficiency wood burning cookstoves in Zimbabwe” for the monitoring period 29-November-2020 to 31-August-2021 (including both days). Through the verification activities, it is to be confirmed that:

- The project is implemented as described in the VCS Project Description document /15/;
- The monitoring system is implemented and fully functional to generate emission reductions without any double counting, and
- The data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reductions calculation.

The verification followed the requirements of the current version of the VCS Standard Version 4.3 and VCS program guide (version 4.2)/B01/ to ensure the quality and consistency of the verification work and the report.

1.2 Scope and Criteria

The verification of this project is based on the Monitoring Report of this monitoring period /01/, registered VCS PD /15/, Emission reduction calculation spreadsheets /02/, supporting documents made available to the verifier /03/ – /17/ and information collected through performing remote interviews. Furthermore, publicly available information was considered as far as available and required.

CC IPL has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The verification is carried out on basis of the following requirements, applicable for this project activity:

- VCS Standard (v4.3) /B01/
- VCS Program Guide (v4.2)/B01/
- VCS Methodology: VMR0006.: Methodology for Installation of High Efficiency Firewood Cookstoves” (Version 1.1)/B02/.
- Other relevant rules, including the host country legislation

The scope of this verification, by independent checking of objective evidence, is as follows:

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

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

CCIPL conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification team VVBs not provide any consulting or recommendations for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

1.3 Level of Assurance

The verification report is based on the Monitoring report /01/, registered VCS PD /15/, supporting documents /03/-/17/ made available to the verifier and information collected through performing interviews.

The verification has been planned and organised to achieve a:

- ☒ Reasonable level of assurance as per VCS Standard (v4.3)
- ☐ Limited level of assurance

The threshold for quantitative materiality with respect to the aggregate of errors, omissions and misrepresentations, relative to the total reported GHG emission reductions and/or removals was limited to five percent, as required by section 4.1.8 of the VCS Standard version 4.3 /B01/.

1.4 Summary Description of the Project

This is the first monitoring report for the project “Installation of high efficiency wood burning cookstoves in Zimbabwe”, which is a grouped project and employs the VCS methodology; VMR0006 version 1.1 /B02/. The grouped project involves distribution of fuel-efficient improved cook stoves (ICS) in Zimbabwe. The project will disseminate 500,000 fuel efficient (ICS) TLC-CQC Rocket stove through 4 years and each year consist of 125,000 ICS , total ICS during this monitoring period is 72,188 out of which 64,969 were operational..The TLC-CQC Rocket stove will reduces the amount of non-renewable biomass used for cooking. PP has considered each ICS distributed as a project activity instance. The start date for the grouped project is 29-November-2020 /03/ which is the date of installation/registration of the first stove in the grouped project.

The project proponent for the project activity is C-Quest Capital Stoves Asia Limited, owns the rights to VERs /05//12/.

The total estimated GHG emission reductions achieved from Project activity instances are 36,701 tCO₂e for this monitoring period.

The project activity has been implemented as described in the registered VCS PD and the emission reductions are calculated conservatively as per the applied methodologies /B02/.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The method and criteria used for verification:

The verification consists of the following three phases:

1. Completeness check and desk 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;
2. Remote interviews (including follow-up interviews with project stakeholders, when deemed necessary). The remote interviews include the following:
 - An assignment of implementation and operation of project activity with respect to validated VCS PD

- Review of information flows for generating, aggregating and reporting the monitoring parameters;
 - Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with the monitoring plan of the validated VCS PD,
 - Cross check of information and data provided in the monitoring report with purchase records or similar data sources;
 - Review of assumptions made in calculating the emission reductions (if any);
 - Implementation of QA/QC procedure in-line with the VCS PD and methodology requirements.
3. Resolution of outstanding issues and the issuance of the final Verification report and as applicable the VCS Verification Deed of Representation.

2.2 Document Review

During the document review, CCIPL 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 and the supporting documentation. This process included:

- A review of data and information presented by the PP to verify their completeness
- A review of the MP and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the QA/QC procedures, and
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of ERs.

The monitoring report (version 1 dated 28/02/2022) /01/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents /03/-/17/. The documents were reviewed by CCIPL. Through the process of the verification, the revised monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the verification team.

The list of documents referred during the course of this verification has been provided in Appendix-1.1.

On site visit exclusion justification:

At the point of commencement of the project, every one of us were impacted by the pandemic COVID-19. Furthermore, related policy measures at each country level created restrictions all over the world impacting travel activities on an international level and partly even for in-country travel. Furthermore, India had also announced its measure to tackle the situation and proposed to quarantine for a minimum period of 14 days upon its return from certain places.

<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1606056>

Similarly, PP was in an equal situation as its personnel (based in the US and India) were not able to travel to Zimbabwe without imposing a threat to the health of its employees or the project partners in Zimbabwe.

In above, background, It was not possible to conduct the on-site inspection

VVB however has ensured that a reasonable level of assurance was maintained with following:

- VVB has conducted a strategic risk analysis including mitigation plan and provided information by which measures any additional risk has been addressed.

Strategic risk analysis and delineation of the sampling/verification and evidence-gathering plan:

CC IPL shall employ the following verification process:

1. Conflict of interest review at the time of contract review;
2. Selection of Audit Team including local expert at the time of contract review;
3. Listing of PD for GSC by VERRA;
4. Development of the verification plan and sampling plan;
5. Desktop review and evaluation of VCS requirements;
6. Follow-up interaction with the client; and final statement and report development.

The assessment process utilizes to gain an understanding of the:

- VCS PD and related VCS requirements
- Implementation VCS project
- Determinate of the baseline situation,
- monitoring plan,
- Data and parameters monitored
- Implementation of any sampling plan,
- Verify the collection and handling of data/evidences.
- Availability of the evidence
- Grievance redressal mechanism
- Ongoing communication with the stakeholders

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. Based on items discussed above and agreed upon with the client in the signed contract, the plan identified the CC IPL audit team, addresses the following:

1. Level of assurance¹

¹ Section 4.1.2 of the VCS Standard, v4.3 states that the VVB shall “select samples of data and information to be validated or verified to provide a reasonable level of assurance and to meet the materiality criteria. Quantitative materiality demands that the threshold

2. Materiality
3. Standards of evaluation and reporting for the verification including the assessment criteria.
4. Scope and objectives ;_ _
5. Assessment team and the roles of team members;
6. Schedule of verification activities and

Remote interviews

It also provides an outline of the verification process and established project deliverables. This verification plan also includes a sampling plan, which is designed to evaluate all project elements in areas of high risk of inaccuracy or non-conformance.

Verification Approaches

1. ASP: Acceptance Sampling
2. SPL: Sampling approach (all data available)
3. CDC: Complete data check of data including all data aggregation steps
4. 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
☒	5 %	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 five percent

Step 2- Identification of risks, their level and assessment

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 shall be limited to five percent.

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	<i>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).</i>
2.	Project design: Information on project design without adequate controls related to data, evidences (project/sector related)	high	<i>Project design incorrectly described thus leading to incorrect delineation of the baseline scenario, casual change, threats to the project</i>	<i>The risk will be mitigated by reviewing the claims in the VCS PD and its assessment based on VCS requirements. The background documents including monitoring survey/report (such as those related country specific fNRB study) shall cross-checked with the project specific evidence, related to the host country/region and interviews with the related stakeholders.</i>
4.	Accuracy of the monitoring survey	medium	<i>Inadequately delineated monitoring plan may lead non-compliance of the VCS principle</i>	<i>The risk due to accuracy of the monitoring plan will be ensured by reviewing the VCS PD, VCS requirements, sampling tool applied and ensuring feasibility/appropriateness of the monitoring plan by means of remote interviews with the PP, their associates and the end users.</i>

5.	Competence of personnel involved in conducting monitoring including surveys and any testing such as WBT	medium	Interview of the personnel involved and check the training records / accreditation certificates (applicable in case of institutions) involved in conducting such tests/monitoring.	<i>The risk will be mitigated by reviewing the training records of the personnel involved in the conducting such surveys/tests and by following the monitoring responsibilities. For institutions involved in conducting such tests their accreditation certificates will be checked to establish their competence for conducting such tests. The training records and certificates will be reviewed which will also be confirmed during the remote interviews.</i>
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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 VCU's 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 VCS 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. 11) calculation is provided below.

AS: Acceptance Sampling

VVB has applied a sampling approach for the remote interview as part of assessment in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0 .In accordance with the paragraph 39 c of the sampling standard, acceptance sampling has been chosen by the verification. Verification team has opted for AQL of 0.5% and UQL of 20%; producer risk of 10% and consumer risk of 10 % in determining the VVB's sample size of 11 with acceptance number (c) as 0. However, VVB interviewed 22 samples (as all 11 Household onsite interviewed have 2 ICS each).Each household were distributed with two cookstoves, so by default VVB

checked and verified both ICS at the premises of each Household interviewed during the remote interviews from the sampling survey done by project participants.

Verification team based on its professional judgement and observation during acceptance sampling, derived its assessment including conclusions as discussed later in different section of this report.

2.3 Interviews

The table below describes the remote interview process and further identifies personnel, including their roles, who were interviewed and/or provided information additional to that provided in the project description, Monitoring report /01/ and any supporting documents.

	Date	Name	Organisation	Topic	Persons Interviewed
/1/	31/03/2022 and 01/04/2022	Vineet Kumar Garg	C-Quest Capital (CQC)	- Project Design - Project Implementation status - Project start date and Project Location - Baseline Scenario - Baseline Identification and Additionality - Qualification and Training - Monitoring and reporting documentation - Quality Assurance – Management and operating system - Social and Environmental Impacts - Local Stakeholders meeting process - Compliance with relevant laws - Roles and responsibility	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/2/	31/03/2022 and 01/04/2022	Tridip Goswami	C-Quest Capital (CQC)	- Project Design - Project Implementation status - Project start date and Project Location - Baseline Scenario - Baseline Identification and Additionality	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness

				• Qualification and Training • Monitoring and reporting documentation • Quality Assurance – Management and operating system • Social and Environmental Impacts • Local Stakeholders meeting process • Compliance with relevant laws • Roles and responsibility	
/3/	31/03/2022 and 01/04/2022	Sanjith Kakkat	C-Quest Capital (CQC)	• Project Design • Project Implementation status • Project start date and Project Location • Baseline Scenario • Baseline Identification and Additionality • Qualification and Training • Monitoring and reporting documentation • Quality Assurance – Management and operating system • Social and Environmental Impacts • Local Stakeholders meeting process • Compliance with relevant laws • Roles and responsibility	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/4/	31/03/2022	Euna Marimo (Stove 1 ID CQCVZW0148237, Stove 2 ID CQCVZW0148244)	End users	Remote interviews (Ex-post parameters) • To check Number of project devices operating during year y (Ny,j,j) • Quantity of woody biomass used by improved	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness

				cookstoves (By=1,new,i,j,survey)	
/5/	31/03/2022	Tsitsi Runganga (Stove 1 ID CQCVZW0054890, Stove 2 ID CQCVZW0054135)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/6/	31/03/2022	Memory Hurubani (Stove 1 ID CQCVZW0015577, Stove 2 ID CQCVZW0015309)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/7/	31/03/2022	THANDI MUCHERI (Stove 1 ID CQCVZW0143216, Stove 2 ID CQCVZW0143215)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/8/	01/04/2022	Davidzo Mutambadiki (Stove 1 ID CQCVZW0038843, Stove 2 ID CQCVZW0038072)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness

				cookstoves (By=1,new,i,j,survey)	
/9/ /	01/04/2022	Ivy Madare (Stove 1 ID CQCVZW0003665, Stove 2 ID CQCVXW0003666)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/10 /	01/04/2022	Pegness Chari (Stove 1 ID CQCVZW0059080, Stove 2 ID CQCVZW0023985)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/11 /	01/04/2022	JOSEPHINE NEKESA WESONGA (Stove 1 ID CQCVKE0045269, Stove 2 ID CQCVKE0045270)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/12 /	01/04/2022	Bless Makandwa (Stove 1 ID CQCVZW0100876, Stove 2 ID CQCVZW0100877)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness

				(By=1,new,i,j,survey)	
/13 /	01/04/2022	Eunice Wangui Maina (Stove 1 ID CQCVKE0047439, Stove 2 ID CQCVKE0047440)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/14 /	01/04/2022	Netsai Jacob (Stove 1 ID CQCVZW002372, Stove 2 ID CQCVZW0023170)	End users	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/15 /	31/03/2022 and 01/04/2022	Sarah stever	Country head Zimbabwe (C-Quest Capital (CQC))	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/16 /	31/03/2022 and 01/04/2022	Wimbiso Simbi	Deputy country Manager (C-Quest Capital (CQC))	Remote interviews (Ex-post parameters) - To check Number of project devices operating during year y (Ny,j,j) - Quantity of woody biomass used by improved cookstoves (By=1,new,i,j,survey)	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness

/17 /	01/04/2022	Oleen-Mushayahwaro (Enumerator)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/18 /	01/04/2022	Noster Marambire (Enumerator)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/19 /	01/04/2022	Kudakwashe Soda (Enumerator)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness
/20 /	01/04/2022	Musafare chikomo (Enumerator)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh, Pallavi Gedam and Netshitumbu Tshimangadz o Witness

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects <https://verra.org/covid-19-travel-guidance/> and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. The on-site inspection can-not be postponed due to verification timeline agreed in between the Project Participant and the VVB as per the verification contract. /16/.

The alternative means used for the purpose of verification are demonstrated as follow:

The verification team has carried out remote interviews (by telephone / skype / video calls) in order to assess the information included in the monitoring report and monitoring measurement procedures adopted during the monitoring period. VVB has also taken pictures of the end uses interviewed during the remote interviews. During the desk review, the relevant monitoring records were checked. Soft copy of original survey records were used to cross check consistency of information.

Through the review of validation reports, comparing the relevant evidence and interview with the PP's representatives through telephone / skype, remote interviews with the house holds sampled by the VVB from the PP's samples, CCIPL has confirmed that the project is implemented in line with the revised and registered VCS PD /15/ during the monitoring period. There is no change of the project design, operation and monitoring plan.

Therefore, VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, CCIPL ensured that the applicable section of the verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit.

2.4 Site Inspections

Carbon Check has not conducted an on-site inspection due to the recent pandemic COVID19 and due to its related policy measures created restrictions all over the world impacting travel activities on an international level and even for in-country travel. A reasonable level of assurance has been maintained through the alternative means used for the purpose of verification as follows:

- 1) An assessment of the implementation and operation of the project activity as per the registered VCS PD
- 2) A review of information aggregating and reporting of the monitoring parameters
- 3) Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the MP
- 4) A cross-check between product sales information provided in the MR and data from other sources.
- 5) A check of the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the VCS PD and the applied monitoring methodologies
- 6) A review of calculations and assumptions made in determining the GHG data and ERs, and
- 7) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters

In line with paragraph 26 of the Sampling Standard, the verification team has applied acceptance sampling approach through remote interviews on the sampling survey as part of verification. The project participant had applied sampling approach. A representative Monitoring survey /07/ was conducted by the representatives of Project participant. The verification team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B04/.

Applying paragraph 39 of the sampling standard, version 09 /B04/, a sample size of 08 households was chosen (with no discrepant records). A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number thus determined for the sample is 0. However, VVB interviewed 22 samples (as all 11 Household onsite interviewed have 2 ICS each). Each household were distributed with two cookstoves, so by default VVB checked and verified both ICS at the premises of each Household interviewed during the onsite visit from the sampling survey done by project participants samples from the sampling survey done by project participants, considering the paragraph 39 (c) which states *“The project activity or the PoA is located in a least developed country or a host Party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified.”* In line with the sampling standard, version 09 /B04/.

The information provided in the sampling survey data /07/, has been cross checked during the remote interviews conducted. As a part of acceptance sampling, the verification team could confirm the sampling

survey data with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09 /B04/.

The verification team carried out remote interviews with representatives of PP in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS.

2.5 Resolution of Findings

CCIPL, during this verification, identified issues related to the monitoring, implementation or operation of the VCS project that could impair the capacity of the proposed VCS project to achieve project emission reductions or influence the reporting of emission reductions. CCIPL has identified, discussed these issues within the Verification report in Appendix B.

- Clarification requests (CLs): Project reporting lacks transparency and further information is needed to determine if a material discrepancy is present.
- Corrective action requests (CARs): The VVB has identified a material discrepancy or non-conformance that the project proponent must address.

The verification team identified 01 CAR and 02 CLs. All CAR and CLs raised by Carbon Check during this verification have been resolved. If this was not completed, the ERs cannot be certified and recommended for issuance to the VCS Registry.

2.5.1 Forward Action Requests

Forward Action Request (FAR) is to be raised when the monitoring and reporting require attention and/or adjustment for the next verification period. FARs VVBs not relate to VCS requirements for issuance of ERs achieved during subject monitoring.

CCIPL has not raised any FAR during this verification.

2.6 Eligibility for Validation Activities

The project activity falls under sectoral scope 03 and the CCIPL is accredited for validation /verification of project activities under this scope.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

It has been confirmed through the description in PD /15/ and through interviews that the project activity VVBs not participate in any emission trading program or any other GHG program and has not sought or received any other form of environmental credit. The project has applied only under VCS for registration. The grouped project is not participating under any other GHG programs..

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period.

3.3 Project Description Deviations

There is no project description deviation identified during the current monitoring period.

3.4 Grouped Project

The grouped project (the project) is the dissemination of energy efficient stoves for cooking purposes. A total of 72,188 ICS were disseminated by the end of this monitoring period out of which 64,969 stoves were operational. 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. Therefore, as described in the registered project document/15/, for each new instance (installed ICS) the eligibility criteria below are confirms the new project activity instances in the assessment below:

The number of new project activity instances added to the project in this verification period: Under this grouped project PP has considered each ICS as a project activity instance which is deemed acceptable as per the VCS Program Definitions and VCS Standard/B01/. The eligibility criteria of the Project Activity Instance, was established at the group project validation in the VCS PD /15/.

- 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):

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	The verification team reviewed the sales record database /09/ and by further conducting interviews with representatives of PP to confirm that all new project activity instances are located within the geographical area identified in the registered VCS PD /15/. All new project activity instances are

	baseline assessments of the geographic area.	located within the host country of Republic of Zimbabwe. This is deemed appropriate to the verification team. Thus, the requirements of this key element is met.
Identification of baseline scenario and demonstration of additionality:	The assessment of baseline scenario and additionality is based upon the initial instances included within each 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.	The verification team reviewed the sales record database /09/, conducted interviews with representatives of PP and 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 /15/, 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. 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 Zimbabwe) within which they are installed. This is deemed appropriate to the verification team. Thus, the requirements of this key element has 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	PP has provided the applicability of each of the eligibility criteria for all

	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.	the project instances in section 3.3 of the MR /01/ which is in compliance with the VCS PD /15/. 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) 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 has 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 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 /15/. 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

		01.1/B02/, sampling for monitoring the project under methodologies has taken place during the current monitoring period. Based on the review of the applied methodologies and VCS PD 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 has 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 electronic sales records (Tally records) for new project activity instances, sales records spreadsheets /09/ 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 /B02/. 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 has 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

The grouped project, “Installation of high efficiency wood burning cookstoves in Zimbabwe” is submitted to VERRA as a VCS project on (VCS Project ID 2341) applying the VCS methodology VMR0006 version 1.1 /B02/ “Methodology for Installation of High Efficiency Firewood Cookstoves”.

This is the first monitoring report for the project “Installation of high efficiency wood burning cookstoves in Zimbabwe”, which is a grouped project and employs the VCS methodology; VMR0006 version 1.1 /B02/. The grouped project involves distribution of fuel-efficient improved cook stoves (ICS) in Zimbabwe. The project will disseminate 500,000 fuel efficient (ICS) TLC-CQC Rocket stove through 4 years and each year consist of 125,000 ICS , total ICS during this monitoring period is 72,188 out of which operational were 64,969 . The TLC-CQC Rocket stove will reduces the amount of non-renewable biomass used for cooking. PP has considered each ICS distributed as a project activity instance. The start date for the grouped project 29-November-2020 /03/ which is the date of installation/registration of the first stove in the grouped project.

The verification team confirms that there is no change from the registered VCS PD of the physical features which may impact the emission reductions of the project activity. This has been confirmed based on the review of sales records /09/, conducting interviews with representatives of PP as well as by carrying out remote interviews with end users. Thus, the verification team concludes all the physical features of the VCS grouped project in the registered VCS PD/15/ are in place.

The verification team confirms that during the current monitoring period (29-November-2020 to 31-August-2021) the VCS grouped project has disseminated 72,188 ICS out of which operational were 64,969 ICS. This was confirmed based on the review of sales records /09/ and further based on interviews with representatives of PP through remote interviews.

During the remote interviews 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 crosscheck with the sales records stored and confirmation that all operational staff were trained before taking up positions. The verification team thus confirmed that the monitoring of the project activity has been implemented in accordance with the monitoring plan in the registered VCS PD.

The registered VCS PD clearly describes the monitoring and responsibility of monitoring is done by PP. During the remote interviews, monitoring, data collection and reporting procedures were confirmed with the relevant staff and through document review of samples of all relevant records.

The verification team confirms that the monitoring plan is in accordance with VCS approved methodologies VMR0006 version 1.1 /B02/. All data are collected and archived in accordance with the applied methodologies and included in the monitoring plan. This was confirmed based on the remote interviews with representatives of PP and upon further review of samples of all relevant records.

All the ex-ante parameters which are used in the calculation of emission reductions are consistent with the VCS PD. It is confirmed that ex-ante parameters mentioned in section 4.1 of the MR /01/ are in line with the parameters mentioned in section 5.1 of the VCS PD. All the ex-post parameters have been monitored as per the monitoring plan and presented in section 4.2 of the MR /01/.

4.2 Safeguards

4.2.1 No Net Harm

Not applicable as the project VVBs not pose any potential negative environmental and socio-economic impact.

4.2.2 Local Stakeholder Consultation

The local stakeholder consultation meetings were held on 26-October-2020 and 25-November-2020 during the validation and have been provided in the section of 2.2 the MR /01/. The local stakeholders for the project was carried out grouped project level which was validated by the validation team at the time of validation of the VCS PD /15/.

The key comments made by the local stakeholders were all answered during the local stakeholder consultation meetings and have also been provided in the section of 2.2 the registered PD /15/ and MR /01-c/.

The local implementation partners 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 audit team has checked through remote audits with the end users, few grievances are listed under section 2.2 of the MR/01/ during the first monitoring period. The Project Proponent has reported its feedback and grievance redressal procedure in Section 2.2 of the MR /01-c/, and the policy is outlined in the document “Project Grievance Redress Mechanism” /18/. In the opinion of assessment team, based on remote interviews 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 /15/ and further confirmed during remote interviews, in case the end-users has a provision to approach CQC through their village chief. The village chief then reports the concerns to the

concerned person, i.e., field staff from CQC 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 /01/.

During the remote interviews and based on document review /01-c/, /18/, it can be confirmed that grievance addressal procedure has been designed and is implemented according to section 2.2 of the MR /01/ and that it is effective in its aim.

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/07/, this has been checked by the verification team during the remote interviews. Hence the verification team deemed the local stakeholders ongoing communication as appropriate.

4.3 AFOLU-Specific Safeguards

This is a non-AFOLU project and hence this section is not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The equations and choices provided in the methodology 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/B02/. 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 and the applied monitoring methodology.

According to applied methodology VMR0006 (version 1.1) /B02/the emissions are calculated as below:

Baseline Emission

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

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 CO₂e
 $ER_{y,i,j}$ = Emission reductions by improved cookstove of type i and batch j during year y in t CO₂e

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times f_{NRB,y} \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95 \quad \text{Equation (2)}$$

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 (fNRB)
 $NCV_{wood\ fuel}$ = Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne)
 EF_{wf,CO_2} = CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO₂/TJ)
 $EF_{wf,non\ CO_2}$ = Non-CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO₂/TJ)
 $N_{y,i,j}$ = Number of improved cookstoves of type i and batch j operating during year y
 0.95 = Discount factor to account for leakage

The quantify of woody biomass saved due to implementation of improved cookstoves to be estimated using equation below:

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

where

η_{old} = Efficiency of baseline cookstove
 $\eta_{new,y,i,j}$ = Efficiency of the improved cookstove type i and batch j determined through water boiling test (WBT) during year y
 Alternatively, efficiency may be determined using Equation 4.
 $B_{y=1,new,i,j,survey}$ = 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.

$$\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94 \quad \text{Equation (4)}$$

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). This value may be based on actual monitoring or based on manufacturer's declaration on expected loss in efficiency or through publicly available literature on relevant industry standards. Alternatively default value of 0.99 efficiency loss per year can be considered.
0.94	=	Adjustment factor to account for uncertainty related to project cookstove efficiency test.

Leakage Emissions: In accordance with methodology VMR0006 version 1.1, 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 Zimbabwe" has being claimed for this monitoring period and the total population of the stoves for this monitoring period (29-November-2020 to 31-August-2021) is 72,188 ICS and out of this 64,969 were operational.

The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology /B02/ and the VCS PD /15/. 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/B02/. As the VCS PD /15/ 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 /12/. Monitoring parameters $N_{y,j,j}$ and $B_{y=1,new,i,j,survey}$ are monitored through monitoring sample surveys. Monitoring of the parameters ensures compliance with the applied methodology VMR0006, version 1.1 /B02/. Verification team has checked the survey records /7/ and sample size calculation/13/. Parameter $N_{y,j,j}$ monitors the number of stove in operation and the parameters $B_{y=1,new,i,j,survey}$ are used to calculate Quantity of woody biomass used by improved cookstoves.

PP has applied sampling for the current monitoring period. A confidence/precision level of 90/10 has been used by the PP for all the monitoring parameters determined through applying simple random sampling. Survey has been carried out. This is in accordance with the sampling plan provided in the registered VCS PD /15/. The sample size calculations for each of the monitoring parameters monitored through the sampling have been provided in the table below. As the calculated sample size were less

than 30, in accordance with the §14 of the sampling standard version 9 /B04/, a minimum sample size of 30 has been chosen when the parameter of interest is a proportion ($N_{y,j,j}$) and Student's t-distribution has been used if the resulting sample size is less than 68 for the mean parameters ($B_{y=1,new,i,j,survey}$). PP has chosen 68 responded samples for both the monitoring parameter.

PP has provided the detailed sample size calculation under section 4.3 of the MR /01/

Definition	Value	Justification
The population size N is	72,188	Number of stoves registered in database
The expected proportion p for $n_{y,i}$ is	0.85	A conservative assumption of 85% is applied for sample size calculation.
Sample size	47.723	Calculated
Sample size (Rounded up)	48	Calculated

The above table mentions the sample size calculated applying the formula;

$$n \geq \frac{1.645^2 N \times p \times (1 - p)}{(N - 1) \times 0.1^2 \times p^2 + 1.645^2 p \times (1 - p)}$$

However, as per the sampling Guideline: Sampling and surveys for CDM project activities and programmes of activities version 04 /B04/, 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 (95/10 reliability criterion for a single sampling plan).

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

In the registered VCS-PD /15/, 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. Sample size, thus arrived, meets the relative precision error i.e. under 10%. However, actual proportion of ICS in operation is observed as 100% during the 1st MP verification , which shows that considering 0.85 as expected proportion is conservative.

Hence, the verification team in review with the sampling guideline /B04/ and PD /15/ deemed conservative and appropriate approach, the same has been updated in section 4.4 of the FVR.

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

Parameters	$N_{y,i,j}$	$B_{y=1,new,i,j,survey}$
Sample size	68	68
Precision achieved	0.28%	6.28%

The achieved precision in the original data is 0 % and the achieved precision in the adjusted data based on stove champion data (0.28%) is less than the required precision level of 10% and thus meets the 90/10 confidence interval/ precision level limit.

VVB used 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 /B04/, a sample size of 11 cookstove was chosen (with no discrepant records). A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number (c) thus determined for the sample is 0. VVB interviewed 22 samples (as all 11 Household onsite interviewed have 2 ICS each). Each household were distributed with two cookstoves, so by default VVB checked and verified both ICS at the premises of each Household interviewed during the onsite visit from the sampling survey done by project participants. It was observed that out of the 22 samples, all the 22 stoves 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 § 33 of the sampling standard, version 09 /B04/. Verification team has cross verified these sample documents.

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

1. Number of project devices operating during year y ($N_{y,j,j}$)
2. Quantity of woody biomass used by improved cookstoves ($B_{y=1,new,i,j,survey}$)

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 /15/.

Remote assessment of Monitoring parameters (namely $B_{y=1,new,i,j,survey}$ and $N_{y,i,j}$) was conducted based on following two methods:

- Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign (or parameter $B_{y=1,new,i,j,survey}$) and survey on stove operation (for the parameter $N_{y,i,j}$).
- Assessment of Competence of personnel involved in conducting standardized tests viz., $B_{y=1,new,i,j,survey}$ and surveys: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the $B_{y=1,new,i,j,survey}$. The verification team based on remote interviews confirms that the team was qualified to carry out the $B_{y=1,new,i,j,survey}$ in line with the methodology.

PP has explained the process of conducting measurement campaign. As PP, field staff asked the user to make a pile for the total wood required for cooking in a day for all the stoves available in the house and weighted with the calibrated weigh scale /17/. Further user was asked to extract and make the piles for the wood required for the project stove 1 and project stove 2 separately from that pile and weigh both the piles. Same has been recorded in the survey forms and in the spreadsheet. Therefore, firewood consumed for each project stove and baseline stove can be distinguished clearly. The calibration records /17/ of the weighing scale used for measuring the fuel wood was checked by the VVB and deemed acceptable. CQC has submitted the attorney's letter /19/ and the email confirmation /20/ in regards with $B_{y=1, new, i, j, survey}$.

During the remote interviews (video call) with PP's representative, VVB was able to understand the process in line with the methodology VMR 0006 version 1.1/B02/ and the PP monitoring procedure in line with the registered VCS PD /15/.

It is worth to note here that PP has selected the same households for the both parameters above and for the same reason, VVB's sample for acceptance sampling was the same for both the parameters. VVB could verify the original survey forms /07/ and data/information flow to sampling sheet and ER spread sheet. No discrepancy was found in the data/information flow. As per the section 2.3 above the end users were not interviewed in a single day. Moreover, PP has conducted the monitoring survey/01/ from 20-November-2021 to 13-December-2021. Hence, the survey process deemed acceptable to the verification team.

Furthermore, the database /09/ and sample sales invoice /10/ 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 /B04/, 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 /B01/, and registered VCS PD /15/. The necessary confidence / precision of 90/10 each of the parameters are met. This has been cross verified by the verification team from the supporting documents submitted/13/.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 01.1 /B01/, and VCS PD /15/. 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.

Table 2:- Parameters Determined ex-ante

The following parameters are determined ex-ante and mentioned in section 5.1 of the VCS PD/15/:

Parameter	Unit	Value	Assessment
$f_{NRB,y}$	Fraction	0.88	-Fixed ex-ante -The value is calculated by third party C4Ecosolutions in line with the applicable methodological CDM Tool 30, version 3.0.
$NCV_{wood\ fuel}$	TJ/tonne	0.0156	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
EF_{wf,CO_2}	tCO ₂ /TJ	112	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
$EF_{wf,non\ CO_2}$	tCO ₂ /TJ	26.23	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
η_{old}	Fraction	0.1	- Fixed ex-ante - Default values from the methodology.
η_p	Fraction	0.345	- Fixed ex-ante -Manufacturers specification.

Data mentioned in the above table is checked through below steps:

- Applied methodology
- Distribution records
- Third party reports
- National/ international Guidelines

Moreover, under section 1.1 of the MR, it clearly says that the registration and monitoring system has been handed by hand held digital devices (smart phones and/or tablets). The same has been observed during the remote interviews and deemed low risk of manual transposition errors between data records.

The spread sheet submitted by the PP clearly and transparently mentions values of the data parameters used for calculation of emission reductions. The input values have been verified from the reliable and authentic sources including monitoring records (distribution records) /07/, MR /01/, and applied methodology /B01/. The emission reductions calculated were compared with the emission reduction spread sheet /02/ and found to be correct. No significant reporting risks have been identified for the data reported.

The details of monitoring parameters used for calculation of emission reductions are provided below:

Table 3:- Parameters monitored ex-post

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Number of project devices of type i and batch j operating during year y ($N_{y,i,j}$)
Measuring frequency/Time Interval:	once every two years
Reporting frequency:	once every two years
Reported value:	64,969
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from monitoring survey of samples /09/ and data base.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD VVBs not specify the accuracy of the monitoring equipment, VVBs the monitoring equipment represent good monitoring practise?	NA

Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD VVBs not specify the frequency of calibration, VVBs the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in MR comply with registered VCS PD /15/
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR /01/ has been compared with monitoring survey records /09/ and the ER sheet /02/. The total number of cook-stove has been cross checked with the database /09/ and registration certificate /10/ as provided by the PP. VVB confirms here that remote assessment of Monitoring parameter $N_{y,ij}$ was conducted based on following two methods: ➤ Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign, survey on stove operation (for the parameter $N_{y,ij}$). ➤ Assessment of Competence of personnel involved in conducting/12/
How were the values in the monitoring report verified?	Please refer to the assessment of Finding 2 in APPENDIX 5: SECTION 6.1 VERRA REVIEW.
VVBs the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have	NA

not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	
--	--

Monitoring Parameter Requirement	Assessment/ Observation by the VVB		
Data / Parameter: (as in monitoring plan of VCS PD):	Efficiency of the improved cookstove type i and batch j during year y ($\eta_{new,y,i,j}$)		
Measuring frequency/Time Interval:	Annually		
Reporting frequency:	Annually		
Reported value:	Year (y)	$\eta_{new,y,i,j}$	
	1	32.43%	
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes		
Details of monitoring equipment:	Value is calculated in the ER spread sheet /02/		
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD VVBs not specify the accuracy of the monitoring equipment, VVBs the monitoring equipment represent good monitoring practise?	NA		
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA		
Is the calibration interval in line with the monitoring plan of VCS PD? If the VCS PD VVBs not specify the frequency of calibration, VVBs the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in MR comply with VCS PD /15/		
Company performing the calibration (internal or external calibration):	NA		

Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the ER sheet /02/.
How were the values in the monitoring report verified?	NA
VVBs the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type i and batch j ($B_{y=1,new,i,j,survey}$)
Measuring frequency/Time Interval:	In the first year of project implementation
Reporting frequency:	In the first year of project implementation
Reported value:	0.7439(Tonnes per device per year)
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from monitoring survey of samples /09/ Weighing scale

	Model:- H-110 Accuracy:- OIML M2 Calibration date: 18-November-2021
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD VVBs not specify the accuracy of the monitoring equipment, VVBs the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD VVBs not specify the frequency of calibration, VVBs the selected frequency represent good monitoring practise?	Calibration/17/ of weighing scales used for measuring the fuel wood was done in house before start using on site. QA/QC procedures stated in MR comply with registered VCS PD /15/
Company performing the calibration (internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR/01/ has been compared with the ER sheet /02/. VVB during the remote assessment of Monitoring parameters $B_{y=1,new,i,j,survey}$ was conducted based on following two methods: ➤ Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign (or parameter $B_{y=1,new,i,j,survey}$) and survey on stove operation (for the parameter $N_{y,i,j}$). ➤ Assessment of Competence of personnel involved in conducting standardized tests viz., $B_{y=1,new,i,j,survey}$ and surveys: Verification team has reviewed the abilities, qualifications and recognition of involved

	personnel and institutions of the measuring team involved in the $B_{y=1,new,i,j,survey}$. The verification team based on remote interviews confirms that the team was qualified to carry out the $B_{y=1,new,i,j,survey}$ and Usage survey in line with the methodology. PP has explained the process of conducting measurement campaign. As PP, field staff asked the user to make a pile for the total wood required for cooking in a day for all the stoves available in the house and weighted with the calibrated weigh scale /17/. Further user was asked to extract and make the piles for the wood required for the project stove 1 and project stove 2 separately from that pile and weigh both the piles. Same has been recorded in the survey forms and in the spreadsheet. Therefore, firewood consumed for each project stove and baseline stove can be distinguished clearly. The calibration records /17/ of the weighing scale used for measuring the fuel wood was checked by the VVB and deemed acceptable. During the remote interviews (video call) with PP's representative, VVB was able to understand the process in line with the methodology VMR0006 version 1.1/B02/ and the PP monitoring procedure in line with the registered VCS PD /15/. CQC has submitted attorney's letter /22/ and the email confirmation /23/ in regards with the revised values submitted to VVB for the parameter $B_{y=1,new,i,j,survey}$.
How were the values in the monitoring report verified?	Please refer to the assessment of Finding 1 in APPENDIX 5: SECTION 6.1 VERRA REVIEW.
VVBs the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data from monitoring survey /09/ and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	The operating lifetime of the project device. (Life Span)
Measuring frequency/Time Interval:	Once at the time of project stove installation
Reporting frequency:	Once at the time of project stove installation
Reported value:	10
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from Manufacturer specification /04/
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD VVBs not specify the accuracy of the monitoring equipment, VVBs the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD VVBs not specify the frequency of calibration, VVBs the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in MR comply with VCS PD /15/
Company performing the calibration (internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the ER sheet /02/.

How were the values in the monitoring report verified?	NA
VVBs the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data from monitoring survey /09/ and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Verification team confirms that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the pre-defined formulae from registered VCS PD /15/. The total number of emission reductions for the monitoring period (29-November-2020 to 31-August-2021) is 36,701 tCO₂e.

The verification team has checked and confirmed the calculations in the spreadsheet and found to be accurate. The monitoring report is supported by emission reduction spreadsheet. 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 report emission reduction, CCIPL 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, CCIPL 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, CCIPL 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 Appendix 1 below.

CC IPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology.

Proper data management inclusive of data acquisition and aggregation, data management system is being followed for the project activity.

The monitoring personnel at site are well trained and follow reproducible routines. Thus, they are competent to carry out the relevant tasks with sufficient accuracy.

4.6 Non-Permanence Risk Analysis

Not applicable

5 VERIFICATION CONCLUSION

The Project Participant, C-Quest Capital Stoves Asia Limited, has commissioned the VVB, Carbon Check (India) Private Ltd. to perform an verification of the VCS Project Activity “Installation of high efficiency wood burning cookstoves in Zimbabwe”. This report summarises the findings of the verification of the project, performed on the basis of VCS criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The verification process was performed on the basis of all guidance and criteria as provided in VCS Standard version 4.2 /B01-a/, VCS Program Guide version 4.1 /B01-b/, VCS Validation and Verification Manual version 3.2 /B01-c/ and Registration & Issuance Process version 4.1 /B01-d/.

The selected baseline and monitoring methodology (VMR0006, Version 1.1) is applicable to the project and correctly applied.

The verification team confirm that the project has been implemented in accordance with the project description/15/.

Verification period: From 29-November-2020 to 31-August-2021 (both days inclusive)

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
29-November-2020 to 31-December-2020	1	0	0	1
01-January-2021 to 31-August-2021	36,700	0	0	36,700
Total	36,701	0	0	36,701

The verification team is of the opinion that the project has been implemented in accordance with the registered project description, the MP with complies with the approved monitoring methodology, the monitoring complies with the MP and the monitored data and calculation of ERs are assessed and confirmed as correct.

Therefore, CCIPL hereby certifies, and requests the issuance of, the reported ERs during the monitoring period of 29-November-2020 to 31-August-2021 amounting to 36,701 tCO₂e to the VCS Registry.

APPENDIX 1.1: REFERENCE DOCUMENTS

Ref	Document
/01/	- Monitoring report Version 1, dated 28/02/2022 - Monitoring report Version 1.1, dated 09/05/2022 - Monitoring report Version 1.2, dated 03/08/2022 - Monitoring report Version 1.3, dated 24/08/2024
/02/	ER sheet corresponding to: /01-1/ /01-2/ /01-3/ /01-4/
/03/	Registration certificate dated :29/11/2020 (which is the delivery/installation date of first TLC stove_evidence for the start date of the grouped project)
/04/	Technical specifications of the TLC-CQC Rocket Stove including the life span.
/05/	Proof of right of VERs.
/06/	Company registration certificate for the PP
/07/	Survey records for the monitoring period containing the record of feedback received from stakeholders
/08/	Monitoring Manual
/09/	Database for the ICS distributed and sales records for the monitoring period
/10/	Registration certificate (e.g.; CQCVZW0000917_ for unique identification of each of the ICS
/11/	Monitoring survey questionnaire template
/12/	Training records
/13/	Sampling sheet for selection for the parameters opted for monitoring survey
/14/	End user consent deed / Carbon Credit waivers
/15/	VCS PD for the grouped project “Installation of high efficiency wood burning cookstoves in Zimbabwe” (version 03.1, dated 22/02/2022) and it corresponding validation report version 02.1, dated 22/02/2022.
/16/	Verification contract in between CCIPL and “C-Quest Capital Stoves Asia Limited” dated 11/05/2021.
/17/	Calibration records for the weighing scale used for measuring the fuel wood.
/18/	CQC Grievances Redress policy
/19/	2024.10.01 - CQC Letter to Verra with Exhibit A , dated 01/10/2024
/20/	Email confirmation from VERRA on acceptance of the Letter “2024.10.01 - CQC Letter to Verra with Exhibit A.”
/21/	File 1: 44.03.06 Privileged & Confidential - Stove champion data (26 August 2024)
/22/	File 2: 44.03.05 Stoves in Operation - Verified Secondary Data (2024-08-05).

/23/	File 3: 44.02.10.01.02.01 Verra s6.1 OPERATIONS _MP1 Zimbabwe 2341 Data
/24/	File 4: 44.02.10.01.03.01.01 2341 MP01 Bynew & Nyij Precision_24082024
/25/	1) Confidential - VVB Technical Review Pre-Read (29 July 2024) .pdf 2) indictment__us_v._newcombe_et_al._24_cr._567_redacted%20(1).pdf

APPENDIX 1.2: BACKGROUND DOCUMENTS

Ref	Document
/B01/	VCS Requirements a. VCS Standard (v4.3, dated 22/06/2022) b. VCS Program Guide (v4.2, dated 22/06/2022) c. VCS Validation and Verification Manual version (v3.2, dated 19/10/2016) d. Registration & Issuance Process (v4.2, dated 22/06/2022) e. VCS Program Definitions version (v4.2, dated 22/06/2022) VCS MR template version 4.1 (dated 20/01/2022)
/B02/	Applied baseline and monitoring methodology a. VMR0006. version 1.1, "Methodology for Installation of High Efficiency Firewood Cookstoves"
/B03/	Methodological Tool • CDM Tool 30 "Calculation of the fraction of non-renewable biomass" Version 03.0
/B04/	a. "Standard for sampling and surveys for CDM project activities and programme of activities" (version 09.0) b. Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04)
/B05/	Website and links: 1. IPCC (http://www.ipcc-nggip.iges.or.jp) 2. http://cdm.unfccc.int 3. http://www.v-c-s.org

APPENDIX 2: ABBREVIATIONS

CDM	Clean Development Mechanism
BE	Baseline Emission
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DPR	Detailed project report
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
ER	Emission Reduction
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
MW	Mega Watt
MWh	Mega Watt Hour
NA	Not Applicable
OSV	On Site Visit
PD	Project Description
PP	Project Proponent
QC/QA	Quality control/Quality assurance
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit
VVB	Validation Verification Body
VVM	Validation and Verification Manual
VVS	Validation and Verification Standard

APPENDIX 3: CERTIFICATES OF COMPETENCE



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC 14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☒ CCB Expert	☐ Legal Expert	☒ Financial Expert	☒ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ Local Expert for India/RSA and Spanish speaking countries			

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☒ TA 4.1
☒ TA 4. n	☐ TA 5.1	☐ TA 5.2	☒ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☒ TA 14.1	☒ TA 15.1	☐ TA 16.1		

Issue Date

5th December 2023

Priya Suman

Ms. Priya Suman
Compliance Officer

Expiry Date

31st December 2024

Sanjay Kumar Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022 ¹	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

CC IPL FM 7.9 Certificate of Competency_V4.0_112023

¹ Please refer to previous version of FM 7.9 for the revision history



Carbon Check (India) Private Limited

Certificate of Competency

Ms. Pallavi Gedam

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

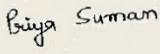
☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ Local Expert for India			

in the following Technical Areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1	☐ TA 16.1		

Issue Date

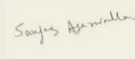
5th December 2023



Ms. Priya Suman
Compliance Officer

Expiry Date

31st December 2024



Mr. Sanjay Kumar Agarwalla
Technical Director

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¹ Please refer to previous version of FM 7.9 for the revision history



Carbon Check (India) Private Limited

Certificate of Competency

Ms. Priya Suman

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	
☒ Local Expert for India			

in the following Technical Areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024



Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

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CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

¹ Please refer to previous version of FM 7.9 for the revision history



Carbon Check (India) Private Limited

Certificate of Competency

Ms. Indumathi C

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

- | | | | |
|--|--|---|---|
| ☒ Validator | ☒ Verifier | ☒ Team Leader | ☒ Technical Expert |
| ☒ Technical Reviewer | ☐ Health Expert | ☐ Gender Expert | ☒ Plastic Waste Expert |
| ☐ CCB Expert | ☐ Legal Expert | ☒ Financial Expert | ☐ Environmental, Health and Safety financial matters |
| ☒ SDG+ | ☒ Social no-harm(S+) | ☒ Environment no-harm(E+) | |
| ☒ Local Expert for India and Sri Lanka | | | |

in the following Technical Areas:

- | | | | | |
|--|--|----------------------------------|---|---|
| ☒ TA 1.1 | ☒ TA 1.2 | ☐ TA 2.1 | ☒ TA 3.1 | ☐ TA 4.1 |
| ☐ TA 4. n | ☐ TA 5.1 | ☐ TA 5.2 | ☐ TA 7.1 | ☐ TA 8.1 |
| ☐ TA 9.1 | ☐ TA 9.2 | ☐ TA 10.1 | ☒ TA 13.1 | ☒ TA 13.2 |
| ☐ TA 14.1 | ☐ TA 15.1 | ☐ TA 16.1 | | |

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
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Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

¹ Please refer to previous version of FM 7.9 for the revision history

APPENDIX 4: FINDINGS LOG

Table 1. CLs from this verification

Finding	CL 01
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding (VVB)	In accordance with the requirement of section 9.2 “Data and Parameters Monitored” of the methodology VMR0006 version 01.1 under parameter “By=1,new,l,j,survey” which clearly states under description of measurement methods and procedures to be applied:. (b) If multiple devices are used in the project, it is possible from the results of the survey questions to clearly differentiate the quantity of firewood being used by each device. In other words, if more than one device, or another device that consumes firewood, are in use in project households, then the sample survey needs to distinguish the quantity of firewood used by the project device and the other devices that use firewood”. In the MR, the PP is required to provide further information on how respective TLC stove’s consumptions were measured. The methods, the duration (number of days), the equipment applied and their accuracy, and whether the PP provided the firewood to the end-user for the survey. During the remote interviews it is observed traditional stoves (three stone fire stove) in use by the end users. PP to clarify on how sample survey distinguishes this point of methodology.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	At the time of the survey, field staff asked the user to make a pile for the total wood fuel required for cooking in a day for all the stoves (including baseline and project stoves) available in his/her house and weighted the same. Further, user was asked to extract and make the separate piles of the wood fuel required for the project stove 1 and project stove 2 from that pile and then surveyor weighs both the piles. Remaining portion, if any after the segregation of 2

Finding	CL 01
	piles for both project stove will be accounted as baseline stove wood fuel usage. The same has been recorded in the survey forms and in the spreadsheet. Therefore, firewood consumed for each project stove and baseline stove can be distinguished clearly. Necessary information related to the measurement of wood consumption for each TLC stove being used by the user, equipment used, accuracy class & calibration details has now been incorporated under section 4.2 of revised MR. PP didn't provide any firewood to the end-user during the survey. During the monitoring survey, the survey team only measured the firewood that was available at the end user's premises. Same has been incorporated under footnote 3 of the revised MR.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	VVB confirms here that remote assessment of Monitoring parameters (namely $B_{y=1,new,i,j,survey}$) was conducted based on following two methods: ➤ Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign (or parameter $B_{y=1,new,i,j,survey}$) and survey on stove operation (for the parameter $N_{y,i,j}$). ➤ Assessment of Competence of personnel involved in conducting standardized tests viz., $B_{y=1,new,i,j,survey}$ and surveys: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the $B_{y=1,new,i,j,survey}$. The verification team based on remote interviews confirms that the team was qualified to carry out the $B_{y=1,new,i,j,survey}$ and Usage survey in line with the methodology. The calibration records /17/ of the weighing scale used for measuring the fuel wood was checked by the VVB and deemed acceptable. Moreover, PP has also revised the section 4.2 of the MR for the better understanding. Hence the justification provided by the PP is deemed acceptable.

Finding	CL 01
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 02
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding (VVB)	PP has provided the sampling sheet, sampling results and reliability calculation is inconsistent with the MR section 4.3. Moreover, sample survey size mentioned in the PD is 76, sampling sheet has 68. PP to clarify the same.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	There was a typo error in section 4.3 of the monitoring report for the surveyed samples. The correct number was 68, which has now been corrected in the revised MR.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	PP has submitted the revised the MR, all the typo errors has been rectified. This has been checked and verified by the verification team and deemed appropriate. Hence CL 02 is closed.

Finding	CL 02
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Table 2. CARs from this verification

Finding	CAR 01
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (VVB)	PP needs to provide the training records for the field assistance. As per the QA/QC procedure in VCS PD under section 5.3 states “<i>The sampling plan has the following procedures in place to ensure good quality data. The CME will ensure that field personnel have reviewed, understand and have signed the monitoring plan, including provisions for maximizing response rates, documenting out-of-population cases, refusals and other sources of non-response</i>” and as per the implementation plan “<i>Field personnel will receive training on how to properly deal with surveying techniques and reduce errors and sign a document certifying that there is no conflict of interest of those involved in data collection and analysis</i>”. Verification team during the remote audits/interviews with the PP representatives, and field coordinator/ enumerators, do they fulfil the above QA/QC procedure as stated in VCS PD during the monitoring survey. PP to justify the same Furthermore, PP is requested to provide the survey sheets for all the monitoring surveys households. PP to clarify on the same.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	Proper training was provided to the field staff before starting the surveys. Records of the training conducted before the survey have been submitted to VVB for further verification. Survey sheets for all the monitoring survey households have now been submitted to the verification team for further review.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	PP has provided the training reports of the field staff and this has been checked and verified by the verification team. Moreover, PP has also submitted the scanned survey forms, This has been checked and verified by the verification team and deemed acceptable. Hence the CAR 01 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

APPENDIX 5: SECTION 6.1 VERRA REVIEW

The grouped project, “Installation of high efficiency wood burning cookstoves in Zimbabwe” is submitted to VERRA as a VCS project on (VCS Project ID 2341) applying the VCS methodology VMR0006 version 1.1 /B02/ “Methodology for Installation of High Efficiency Firewood Cookstoves”.

This is the first monitoring report for the project “Installation of high efficiency wood burning cookstoves in Zimbabwe”, The grouped project involves distribution of fuel-efficient improved cook stoves (ICS) in Zimbabwe. The project disseminates total 72,188 ICS during this monitoring period, out of which number of ICS in operation is 64,969.

Findings (Covering all the issues as per the PRR)	Documents referred	VVB Assessment
Finding 1 Lack of clarity on the determination of B	- signed letter from their attorney (/19/) - An email confirmation from VERRA (/10/)	In response to the finding raised by VERRA, PP has shared a presentation (Confidential - VVB Technical Review Pre-Read (29 July 2024).pdf) /25-1/ with the

y=1,new,i,j,survey, (Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type i and batch j) and accuracy of the value applied.	3. Confidential - VVB Technical Review Pre-Read (29 July 2024).pdf 4. indictment__us_v._new combe_et_al._24_cr._567_redacted%20(1).pdf 5. 44.02.10.01.02.01 Verra s6.1 OPERATIONS _MP1 Zimbabwe 2341 Data/23/	VVB which states that incorrect MRV data was shared with VVB and VEERA during the initial verification/issuance process. It also states that certain inputs from originally created data were found to be materially different from the MRV submitted data for issuance of VCUs. The presentation states that the original MRV survey data were collected correctly using a cloud-based SAS program called Open Data Kit (“ODK”). In the ODK platform, field data are uploaded and stored in the cloud, providing a clear audit trail of data. The authenticity of the new value (0.7439 tonnes/device/year) for parameter B_{y=1,new,i,j,survey} as against the earlier value of 1.07580tonnes/device/year has been affirmed by PP through a duly signed letter (dated 01/10/2024) /19/ from their attorney which states, “Based on our investigation and review of the analysis conducted by C-Quest for the purposes of the Section 6.1 process, we have conveyed to the Authorities that the by.new data reflected in the Spreadsheets represents accurate updated by.new data.” Furthermore, the same letter
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		has been accepted by VERRA (e-mail /20/ dated: 02/10/2024), affirming the authenticity of the new revised values for parameter $B_{y=1,new,i,j,survey}$. The VVB has reviewed all the above-mentioned documents and considers that the new and revised value of the parameter $B_{y=1,new,i,j,survey}$ is lower than the value reported in the earlier submitted MR and FVR. The lower value leads to a conservative calculation of emission reduction generated by the grouped project and is deemed acceptable to the VVB. 2. The monitoring report has been revised by the PP (refer section 4.2), and transparently outlines the process and methods used to determine this value the parameter '$B_{y=1,new,i,j,survey}$'. 3. The revised MR (refer section 4.3) and VR (in section 4.4) clearly describes the sampling approach and the confidence and precision level applied for determination of sample size. In the referred section of FVR, VVB has assessed that the survey conducted meets the statistical requirements of 90/10 confidence and also complied. 4. Assessment of Monitoring parameters (namely $B_{y=1,new,i,j,survey}$) was conducted
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		based on following two methods: (i) Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign (or parameter $B_{y=1,new,i,j,survey}$) (ii) Assessment of Competence of personnel involved in conducting standardized tests viz., $B_{y=1,new,i,j,survey}$ and surveys: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the $B_{y=1,new,i,j,survey}$. The verification team based on interviews confirms that the team was qualified to carry out the $B_{y=1,new,i,j,survey}$ in line with the methodology. Hence monitoring procedures applied align with VMR0006, v1.1 and the registered PD. Refer section 4.4 of the updated VR.
Finding 2 Determination of the proportion of installed cookstoves operating	1. ER sheet corresponding /02/ to Monitoring report version 1.3 /01/ , dated 24/08/2024	1. In response to the finding raised by VERRA, PP has shared a presentation (Confidential - VVB Technical Review Pre-Read (29 July 2024).pdf) /24-1/ with the VVB

within the period not transparent	2. File 1: 44.03.06 Privileged & Confidential - Stove champion data (26 August 2024) /21/ 3. File 2: 44.03.05 Stoves in Operation - Verified Secondary Data (2024-08-05). /22/	which states that an overestimated operational fraction data was shared with VVB and VERRA during the initial verification/issuance process. It also states the design of sampling (during the original sampling process) was done in way, to deliberately inflate operational fraction value. To address the issue of overestimated operational fraction data, PP has applied a value of 90% for the stove operating faction considering an annual compounding loss rate of 10%/Stoves in Operation of 90%. The revised value of stove operating faction is based on the independent review and analysis reports of the values provided stove operating faction used for ICS projects under different GHG program as detailed on page 13 of the presentation (Confidential - VVB Technical Review Pre-Read (29 July 2024).pdf) /24-1/. Furthermore, PP has submitted following documents to the VVB: • File 1: 44.03.06 Privileged & Confidential - Stove champion data (26 August 2024) /20/ • File 2: 44.03.05 Stoves in Operation - Verified Secondary Data (2024-08-05) /21/ The analysis of the most recent data collection provides value of 95.63% for the parameter. Moreover, comparison with secondary data i.e., data from other similar regional projects show an average
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		operational rate of 91.70%. However, PP has chosen to apply a revised value of 90% for stove operating fraction for this monitoring period. The VVB has reviewed all the above-mentioned documents along with revised MR /01-4/ and ER sheet/02-2/ and considers that the new and revised value (90%) of the stove operating fraction is lower than the value (100%) reported in the earlier submitted MR and FVR. The lower value leads to a conservative calculation of emission reduction generated by the grouped project and is deemed acceptable to the VVB. 2. Refer to the assessment for point 1. 3. Refer to the assessment of point 1.
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