INSTALLATION OF HIGH EFFICIENCY WOOD BURNING COOKSTOVES IN MALAWI

Document Prepared By:

Carbon Check (India) Private Ltd.

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Prepared By	Carbon Check (India) Private Ltd.
Contact	Carbon Check (India) Private Ltd. 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi 110005 projects@carboncheck.co.in www.carboncheck.co.in
Approved By	Amit Anand
Work Carried Out By	Vikash Kumar Singh (Team Leader, Technical Expert) Pallavi Ganesh Gedam (Assessor) Priya Suman (Assessor) Indumathi C. (Technical Reviewer)

Summary:

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

  Verification: Carbon Check (India) Private Ltd. (CCIPL) 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 Malawi". The verification is based on the desk review of the Monitoring report /01/, VCS PD and the corresponding validation report /20/, 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 01/12/2020 to 15/04/2021 (including both the days).

  Project: The project "Installation of high efficiency wood burning cookstoves in Malawi", 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 Malawi. 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 04 findings were raised, which includes:

01 Corrective Action Request (CAR); 03 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 Malawi" 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 Malawi" during the period from 01/12/2020 to 15/04/2021, is amount 53,970 tCO_2 equivalent.

CCIPL does not assume any responsibility towards the issuance and utilisation of VCUs hereby verified and certified. Request for issuance of VCUs 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.

1. CONTENTS

1 INTRODUCTION

1.1 Objective

Carbon Check (India) Private Ltd. (CCIPL) 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 Malawi" for the monitoring period 01/12/2020 to 15/04/2021 (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 /20/;
- 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 4.1 and VCS program guide (version 4.0)/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 – 15/ and information collected through performing remote interviews. Furthermore, publicly available information was considered as far as available and required.

CCIPL 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 (v4.1) /B01/
- VCS Program Guide (v4.0) /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 does 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/-/15/ 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 (v4.1)

☐ Limited level of assurance

1.4 Summary Description of the Project

This is the first monitoring report for the project "Installation of high efficiency wood burning cookstoves in Malawi, 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 Malawi. 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 54,638. 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 01/12/2020 /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 53,970 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 16/08/2021) /01/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents /03/-15/. 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.

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/	15/09/2021 and 17/09/2021	Vineet Kumar Garg	C-Quest Capital (CQC)	• Project Design • Project Implementation status	Vikash Kumar Singh and Pallavi Gedam

				• 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	
/2/	15/09/2021 and 17/09/2021	Tridip Goswami	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	Vikash Kumar Singh and Pallavi Gedam

				• Social and Environmental Impacts • Local Stakeholders meeting process • Compliance with relevant laws • Roles and responsibility	
/3/	15/09/2021 and 17/09/2021	Tanya Sharma	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 and Pallavi Gedam
/4/	15/09/2021 and 17/09/2021	Onyx Msachiwa	C-Quest Capital (CQC)	• Qualification and Training • Monitoring and reporting documentation • Quality Assurance – Management and operating system	Vikash Kumar Singh and Pallavi Gedam

				• Social and Environmental Impacts • Local Stakeholders meeting process	
/5/	15/09/2021	THOMUSONI CHIWALE (Stove 1 ID CQCSSAMT410538 and Stove 2 ID CQCSSAMT410539)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/6/	15/09/2021	INESI LIFA (Stove 1 ID CQCSSAMT456461 and Stove 2 ID CQCVMW0005768)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/7/	15/09/2021	MARIA KLAMESI (Stove 1 ID CQCVMW0097101 and Stove 2 ID CQCVMW0097158)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/8/	15/09/2021	KHILISE MAFIUZI (Stove 1 ID CQCVMW0062661 and Stove 2 ID CQCVMW0062660)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/9/	15/09/2021	Getrude Luka (Stove 1 ID CQCVMW0049607 and Stove 2 ID CQCVMW0049609)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/10/	15/09/2021	MALITA WITIYASI (Stove 1 ID CQCVMW0006761 and Stove 2 ID CQCVMW0006764)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/11/	15/09/2021	LEZENIA MALISAWO (Stove 1 ID CQCVMW0098060 and Stove 2 ID CQCVMW0098061)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/12/	15/09/2021	ALINAFE GIFT (Stove 1 ID CQCSSAMT427642 and Stove 2 ID CQCSSAMT427643)	End users	Remote interviews	Vikash Kumar Singh and Pallavi Gedam
/13/	17/09/2021	Chimwemwe Liwewe (Field Assistance)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh and

					Pallavi Gedam
/14/	17/09/2021	Scholar Mkomba (Field Assistance)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh and Pallavi Gedam
/15/	17/09/2021	Aubrey Zalira (Field Assistance)	C-Quest Capital (CQC)	Monitoring survey	Vikash Kumar Singh and Pallavi Gedam

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 /B03/.

Applying paragraph 39 of the sampling standard, version 09 /B03/, a sample size of 08 households was chosen (with one discrepant records). A sample size of 08 was determined, based on an AQL of 1.0% and UQL of 20%, producer risk 10% and consumer risk 20%. Acceptance number thus determined for the sample is 0. However, VVB interviewed 08 samples from the sampling survey done by project participants.

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 /B03/.

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 03 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 does 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 does 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 54.638 ICS were disseminated by the end of this monitoring period. The volume of ICS distributed in this period is smaller than ex-ante anticipated in the registered document, resulting in lower emission reductions than anticipated. 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 after validation) against the requirements of the following key elements defined in section 3.2.11 of the Validation and Verification Manual (version 3.2):

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 Malawi. 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 Malawi) 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 Malawi" is submitted to VERRA as a VCS project on (VCS Project ID 2342) 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 Malawi", 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 Malawi. 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 54,638. 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 01/12/2020 /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 (01/12/2020 to 15/04/2021) the VCS grouped project has disseminated 54,638 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 does not pose any potential negative environmental and socio-economic impact.

4.2.2 Local Stakeholder Consultation

The local stakeholder consultation meetings were held on different days 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/.

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) 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

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

Where:

i	=	Indices for the situation where more than one type/model of improved cookstove is introduced to replace three-stone fire
j	=	Indices for the situation where there is more than one batch of improved cookstove of type *i*
ER_y	=	Emission reductions during year *y* in t CO_2e
$ER_{y,i,j}$	=	Emission reductions by improved cookstove of type *i* and batch *j* during year *y* in t CO_2e

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

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)
$EF_{wf,CO2}$	=	CO_2 emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO_2/TJ)
$EF_{wf,non\ CO2}$	=	Non-CO_2 emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO_2/TJ)
$N_{y,i,j}$	=	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 Malawi" has being claimed for this monitoring period and the total population of the stoves for this monitoring period (01/12/2020 to 15/04/2021) is 54,638 ICS.

VVB used sampling during verification for checking the operational status in the households. Considering that Malawi is a Least Developed Country, applying paragraph 39 (c) of the sampling standard, version 09 /B04/, a sample size of 8 households was chosen (with no discrepant records). A sample size of 8 was determined, based on an AQL of 1.0% and UQL of 20%, producer risk 10% and consumer risk 20%. Acceptance number (c) thus determined for the sample is 0. VVB interviewed 8 samples (each, for monitoring survey). It was observed that out of the 8 samples, all the 8 stoves were found to be operational and this matched with the PP's records and hence no discrepant records were observed with the MR /01-3/ and ER sheet /02/ and thus c=0. Thus, CME'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 required 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/.

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.

Parameter	How the CME conducted sampling surveys (to obtain the project participants' or the coordinating/managing entities' records)	How the VVB could obtain records for verification	Criteria for deciding what ultimately constitutes a discrepancy
Number of project devices operating during year y ($N_{y,j,j}$)	Sampling based survey (questionnaire survey/interviews) Visual inspection of the premises to see if ICS is operational and in use. Interview with end user if required to verify that ICS is still in use [Yes/No]	Cross-check of a sample of project participants' samples (questionnaire operation surveys/interviews) including but not limited to following: • Consistency between the information as contained in Survey sheet and revealed from the remote interviews • Baseline scenario of the household • Enquire/observe the pre-project/baseline stove/s and its operation during the project scenario.	VVB results, accounting for duly justified differences.
Quantity of woody biomass used by improved cookstoves ($B_{y=1,new,i,j,survey}$)	Interview with end user and measurement of wood fuel used for project stove [Weight of fuel wood]	• Enquire/observe parallel use of any other stove and their fuel • Enquire/observe source /storage of fuelwood /charcoal or any other fuel Enquire number of meals cooked (along with family size of household) on project cook stove or any other baseline and/or stoves utilizing other fuel/s.	VVB results, accounting for duly justified differences.

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 in line with the applied methodology. As the VCS PD /15/ mentions the option for Simple random Sampling procedure, it is acceptable to the verification team.

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.

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.

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	0.91	-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.
$EF_{wf,CO2}$	tCO_2/TJ	112	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
$EF_{wf,non\ CO2}$	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.

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:

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:	54,638
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/
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does 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 does not specify the frequency of calibration, does 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 monitoring survey records /09/ and the ER sheet /02/.
How were the values in the monitoring report verified?	NA
Does 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):	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 does not specify the accuracy of the monitoring equipment, does 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 does not specify the frequency of calibration, does 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		
Does 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:	1.33 (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/
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does 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 does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Calibration 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 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
Does 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 does not specify the accuracy of the monitoring equipment, does 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 does not specify the frequency of calibration, does 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
Does 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 (01/12/2020 to 15/04/2021) is 53,970 tCO_2e.

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.

CCIPL 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 Malawi". 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 4.1 /B01-a/, VCS Program Guide version 4.0/B01-b/, VCS Validation and Verification Manual version 3.2 /B01-c/ and Registration & Issuance Process version 4.0 /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/.

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01/12/2020 to 15/04/2021	53,970	0	*0*	53,970
Total	**53,970**	**0**	**0**	**53,970**

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 01/12/2020 to 15/04/2021 amounting to 53,970 tCO_2e to the VCS Registry.

APPENDIX 1.1: REFERENCE DOCUMENTS

Ref	Document
/01/	1. Monitoring report Version 1, dated 16/08/2021 2. Monitoring report Version 1.1, dated 21/11/2021 3. Monitoring report Version 02, dated 17/01/2022
/02/	ER sheet corresponding to: 1. /01-1,2,3/
/03/	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
/08/	Monitoring Manual

/09/	Database for the ICS distributed and sales records for the monitoring period
/10/	Evidence for unique identification of each of the ICS
/11/	Monitoring survey questionnaire template
/12/	Training records
/13/	Evidence for the random sample selection for the parameters opted for monitoring survey
/14/	Evidence of End user sales receipts/ Carbon Credit waivers
/15/	VCS PD for the grouped project "Installation of high efficiency wood burning cookstoves in Malawi" version 03, dated 11/10/2021 and it corresponding validation report version 4.0, dated 26/10/2021

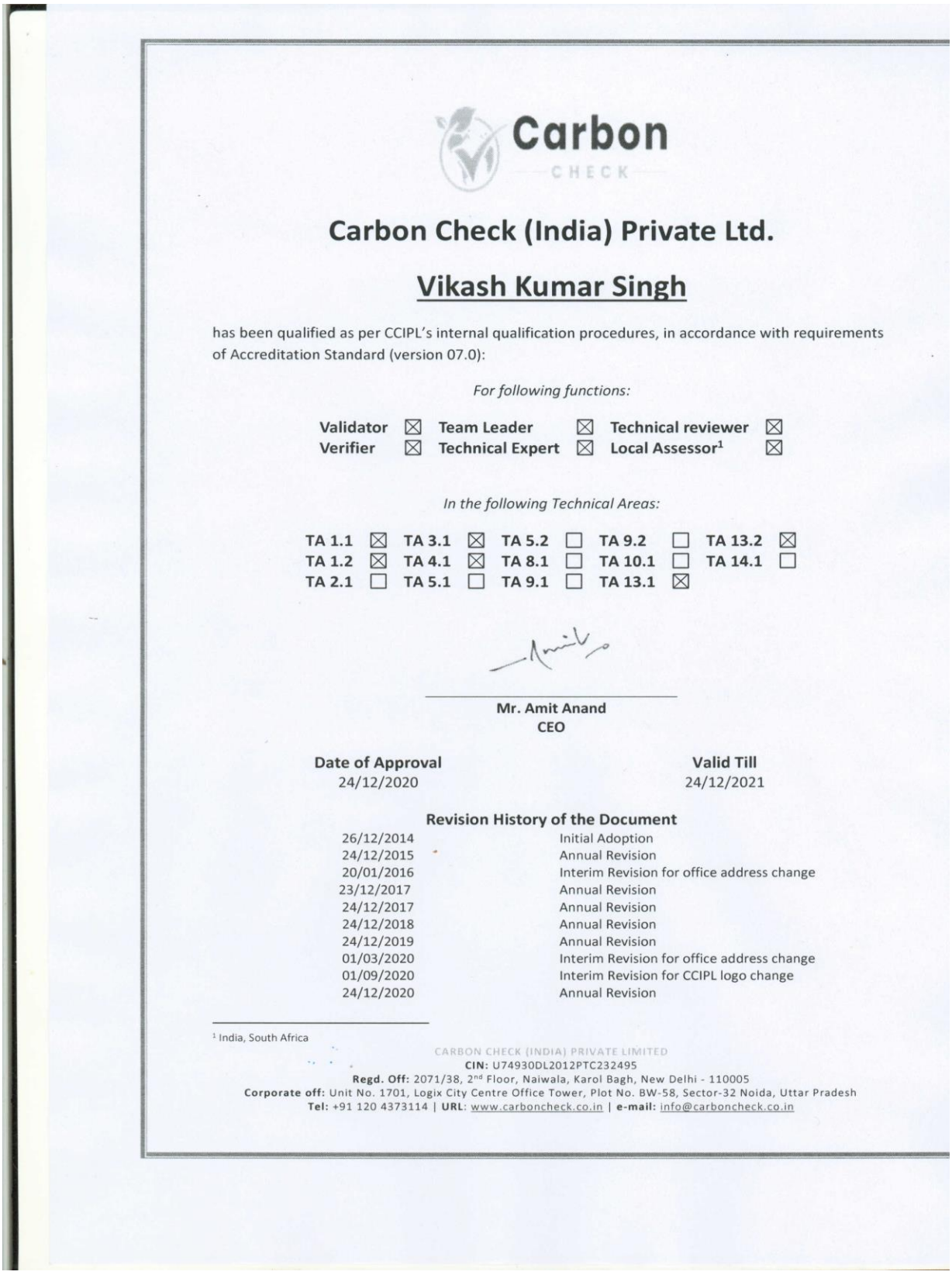
APPENDIX 1.2: BACKGROUND DOCUMENTS

Ref	Document
/B01/	VCS Requirements a. VCS Standard (v4.1, dated 22/04/2021) b. VCS Program Guide (v4.0, dated 19/09/2019) c. VCS Validation and Verification Manual version (v3.2, dated 19/10/2016) d. Registration & Issuance Process (v4.0, dated 19/09/2019) e. VCS Program Definitions version (v4.1, dated 22/04/2021) f. VCS MR template version 4.0
/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
CCIPL	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 Verificatoin Manual
VVS	Validation and Verification Standard

APPENDIX 3: CERTIFICATES OF COMPETENCE



Carbon CHECK

Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	**Team Leader**	☒	**Technical reviewer**	☒		
Verifier	☒	**Technical Expert**	☒	**Local Assessor**[1]	☒		

In the following Technical Areas:

TA 1.1	☒	**TA 3.1**	☒	**TA 5.2**	☐	**TA 9.2**	☐	**TA 13.2**	☒
TA 1.2	☒	**TA 4.1**	☒	**TA 8.1**	☐	**TA 10.1**	☐	**TA 14.1**	☐
TA 2.1	☐	**TA 5.1**	☐	**TA 9.1**	☐	**TA 13.1**	☒		

Mr. Amit Anand
CEO

Date of Approval	**Valid Till**
24/12/2020	24/12/2021

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision
01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

[1] India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
CIN: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh
Tel: +91 120 4373114 | **URL:** www.carboncheck.co.in | **e-mail:** info@carboncheck.co.in

Carbon CHECK

Carbon Check (India) Private Ltd.

Indumathi. C

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

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Verifier	☐	**Technical Expert**	☒	**Local Assessor**[1]	☒		

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TA 1.1	☒	**TA 3.1**	☒	**TA 5.2**	☐	**TA 9.2**	☐	**TA 13.2**	☒
TA 1.2	☒	**TA 4.1**	☐	**TA 8.1**	☐	**TA 10.1**	☐	**TA 14.1**	☐
TA 2.1	☐	**TA 5.1**	☐	**TA 9.1**	☐	**TA 13.1**	☒		

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

Date of Approval
29/09/2021

Valid Till
24/12/2021

Revision History of the Document

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23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision
01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

[1] India and Sri Lanka

CARBON CHECK (INDIA) PRIVATE LIMITED
CIN: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh
Tel: +91 120 4373114 | **URL:** www.carboncheck.co.in | **e-mail:** info@carboncheck.co.in

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 § 3.7 of VCS standard, version 04.1, The project start date of a non-AFOLU project is the date on which the project began generating GHG emission reductions or removals. Projects shall complete validation within specific timeframes from the project start date. In section 1.5 of the MR which states "The start date of this project is 01 December 2020, which is the delivery/installation date of first TLC stove.". During the remote interviews with the field assistant who was involved in the distribution and registration process, found that the start date will be the stove registration date. PP need to clarify the same.		
Corrective Action or clarification #1 *(PP shall write a detailed and clear corrective action or further information for clarification as per finding)*	PP registers/records the ICS in the database once the stove has been constructed on site and all the parts provided to the user i.e., ICS is ready to generate the carbon credits. Same date is termed as the "date_consumer_installed_port_skirt" in the project database. Therefore, start date of the project activity mentioned in the PD, MR and database is the same as mentioned by the field assistant during the remote interview.		
VVB Assessment #1 *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.*	PP has explained and clarified the process of registration above and the same has been mentioned in the PD, and MR. Thus, this has been checked and verified by the verification team.		
Conclusion *Tick the appropriate checkbox*	☐ 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)*	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,I,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". During the remote interviews it is observed traditional stoves (three stone fire stove in use). PP to clarify on how sample survey distinguishes this point of methodology.
Corrective Action or clarification #1 *(PP shall write a detailed and clear corrective action or further information for clarification as per finding)*	At the time of survey, 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 his house and weighted the same. Further user was asked to extract and make the piles for the wood required for the project stove 1 and project stove 2 separately form that 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.
VVB Assessment #1 *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.*	Justification provided by PP in context stated above is deemed acceptable.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 03		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *(VVB)*	In accordance with the requirement of para 13 and 14 of "sampling and surveys for CDM project activities and programme of activities" version 9 was used for determining the sample size and the applied methodology VMR0006 version 01.1. PP to clarify on determining the sample size to achieve 90/10 confidence precision according to the latest version of Standard for sampling and surveys for project activities and programme of		

	activities version 9. Also PP to provide the evidence of randomness of the sample taken for the monitoring parameters.
Corrective Action or clarification #1 *(PP shall write a detailed and clear corrective action or further information for clarification as per finding)*	Sample size calculation sheet & sampling analysis sheet applying the Standard for sampling and surveys for project activities and programme of activities version 9 has been submitted the VVB. Evidence of the randomness of the selected samples has been submitted to VVB.
VVB Assessment #1 *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.*	PP has provided the sample size calculation sheet this has been checked and verified by the verification team and deemed appropriate. Hence the CL 03 is closed.
Conclusion *Tick the appropriate checkbox*	☐ 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/Q procedure which states "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" and as per the implementation plan "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". Verification team during the remote audit found that the person on the field need more training on data collection and analysis. The sampling sheet provided by PP has the different stove ids and the scanned survey forms has the different stove ids. Moreover, this was also observed during the remote interviews stove ids CQCVMW0006764, CQCVMW0005768 and CQCVMW0097733 do not match the scanned survey form.		

	Also, it was notice in the scanned survey form the firewood consumption for stove 1 which is used for 7 days is lower than the wood consumption for stove 2 which is used for 5 days (for stove id CQCVMW0048726). Furthermore, there is also erroneous insertion of the firewood consumption value from the scanned survey form to the sampling sheet (CQCVMW0085356 and CQCVMW0036471). PP to clarify on the same.
Corrective Action or clarification #1 *(PP shall write a detailed and clear corrective action or further information for clarification as per finding)*	Proper training was provided to the field staff before starting the surveys and training records were submitted to VVB for their records. Training records conducted before the survey have been submitted to VVB for further verification. During remote site visit it was observed that the surveyors did not pay attention for the stoves 1 & stoves 2 and some information related to stoves 1 mentioned in the sections of stoves 2 in the survey forms. But this mismatch of information will not affect the survey results and ERs estimation. Because availably of both the stoves were taken into consideration during the survey. therefore for monitoring the parameter $N_{y,i,j}$ i.e. number of project device operating during the monitoring period, both the stoves have been taken into account whether it is project stove 1 or project stove 2. Similarly for quantity of woody biomass used by project devices ($B_{y=1,new,survey}$), average value of wood consumed for both the project stoves were considered for each household. Hence not affected by the interchanging of the measured value. There was typo error in the survey forms while filling the stoves serial numbers by the surveyor. Photograph of the registration cards of the stoves available on the site have been submitted to the VVB for further verification. For stove id CQCVMW0048726 user is using stove 2 as the primary stove and stove 2 as supplementary stove. Therefore, usage of stove 2 is higher than the stove 1. For the stove serial numbers CQCVMW0085356 and CQCVMW0036471, there is copy paste error while copying the information into spread sheet. Same has been corrected in the revised survey sheet. PP further confirms that more stringent training will be provided to the field assistant for monitoring and recording the data for further monitoring surveys to avoid such issues.

VVB Assessment #1 *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.*	PP has provided the training reports of the field staff and this has been checked and verified by the verification team. Justification provided is deemed acceptable to the verification team. The mismatch information is now made inline by the PP and as explained the interchanging of the measured value will not effect the ERs calculations. All the typo errors have been rectified now, and all the documents are made inconsistence. Stove id CQCVMW0048726 as clarified by the PP above, is deemed acceptable. Stove serial numbers CQCVMW0085356 and CQCVMW0036471, error have been rectified and this has been checked and verified by the verification team and found appropriate. Hence the CAR 01 is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed