Verification report for GS4GG Programme of Activity (Gold Standard for the Global Goals)

BASIC INFORMATION	
Title of the GS4GG Project	GS10789 VPA 5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)
GS ID of Project	GS11433
Version number of the verification and certification report	4.0
Completion date of the verification and certification report	11/11/2024
Monitoring period number and duration of this monitoring period	3rd monitoring period Duration: 04/04/2023 to 13/05/2024 (inclusive of both days)
Version number of the monitoring report to which this report applies	1.1 Dated: 20/09/2024
Coordinating/managing entity (CME)	BURN Manufacturing Co.
Project Representative(s)	BURN Manufacturing Co.
Host Party	Democratic Republic of Congo
Applied methodologies and standardized baselines	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 3.1.0
Activity requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Mandatory sectoral scopes	Sectoral Scope 3: Energy Demand
Product requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

Sustainable Development Goals Targeted	SDG Impact	Amounts Achieved	Units/Products
SDG:13 Climate Change	Emission Reductions	128,685	VERs (tCO_2e)
SDG:1 End poverty in all its forms everywhere	Monetary savings related to the purchase charcoal	46.38%	Equivalent monetary savings in %

SDG:3 Ensure healthy lives and promote well-being for all at all ages	Perceived air quality	100%	Households in % perceiving improved air quality
SDG:4 (Quality Education) Ensure equal access for all women and men to affordable and quality technical, vocational, and tertiary education, including university	Number of people receiving skill development training	70	Number of people who participated in project training
SDG:5 (Gender Equality) Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household	Average time saving associated with cooking in the project scenario	67	Average time saved cooking for women in the project scenario (measured in minutes reported by end-user)
SDG:7 Ensure access to affordable, reliable, sustainable and modern energy for all	Number of sold/distributed	17,998	Number of sold/ distributed ICS in use
SDG:8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	No. of jobs created	66	Number of local jobs created
SDG:15 (Life on land) Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Total non-renewable biomass saved	63,443.65	Tons of non-renewable biomass saved in the project scenario from continued use of project technologies

Name of the Gold Standard approved auditor (VVB)	Earthood Services Private Limited
Name, position and signature of the approver of the verification and certification report	 Dr. Kaviraj Singh

	Managing Director

SECTION A. Executive summary

The GS PoA titled "ECOA_BURN multi- country Clean Cooking Programme" involves the distribution of improved cook stoves manufactured by Burn Manufacturing LLC. The VPA is aimed to reduce GHG emissions, deforestation, and reduction in indoor air pollution. The project ICS burns biomass fuels more efficiently, reducing greenhouse gas (GHG) and particulate emissions (PM), leading to better indoor air quality for households in the project. ICSs have a higher thermal efficiency relative to traditional/baseline stoves, so they require less non-renewable biomass fuel for achieving the same thermal energy levels. There have been 19,998 ICS distributions in DRC in accordance with VPA till the end of this monitoring period, hence, 19,998 ICS have been considered by PD for ER calculation during the current MP. Cooking would have been conducted using inefficient, traditional 3-stone fires without the VPA. Project ICS reduces the usage of non-renewable biomass fuels and its associated GHG emissions. The VPA implementer of the PoA is and the technology supplier for the VPA is Burn Manufacturing LLC.

The monitoring period covered under this verification is 04/04/2023 to 13/05/2024 (inclusive of both the dates). The total GHG emission reductions for the current monitoring period are 128,685 tCO_2e. Further, the SDG benefits achieved from the programme are listed in the table below in detail:

Sustainable Development Goals Targeted	SDG Impact	Amounts Achieved	Units/Products
SDG:13 Climate Change	Emission Reductions	128,685	VERs (tCO2e)
SDG:1 End poverty in all its forms everywhere	Monetary savings related to the purchase charcoal	46.38%	Equivalent monetary savings in %
SDG:3 Ensure healthy lives and promote well-being for all at all ages	Perceived air quality	100%	Households in % perceiving improved air quality
SDG:4 (Quality Education) Ensure equal access for all women and men to affordable and quality technical, vocational, and tertiary education, including university	Number of people receiving skill development training	70	Number of people who participated in project training
SDG:5 (Gender Equality) Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared	Average time saving associated with cooking in the project scenario	67	Average time saved cooking for women in the project scenario (measured in minutes reported by end-user)

responsibility within the household			
SDG:7 Ensure access to affordable, reliable, sustainable and modern energy for all	Number of sold/distributed	17,998	Number of sold/ distributed ICS in use
SDG:8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	No. of jobs created	66	Number of local jobs created
SDG:15 (Life on land) Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Total non-renewable biomass saved	63,443.65	Tons of non-renewable biomass saved in the project scenario from continued use of project technologies

Scope of verification

The verification is an independent and objective review for determination of the monitored reductions in GHG emissions by the VVB. The verification includes the implementation and operation of the PoA as set out in the registered PoA-DD/1/ & VPA-DD/2/ for VPA 5 in the monitoring period.

The verification tests the data and assertions set out in the monitoring report prepared for this monitoring period, and it is based on the review of the following:

(i) The approved methodology TPDDTEC – "Technologies and Practices to Displace Decentralized Thermal Energy Consumptions, Version 3.1 /6/
(ii) The registered PoA-DD/1/, registered VPA-DD/2/ & previous verification report/3/ and monitoring plan/2/
(iii) UNFCCC criteria referred to in the Kyoto Protocol criteria and the CDM modalities and procedures as agreed in the Bonn Agreement and the Marrakech Accords/34/
(iv) GS4GG principle and requirements /19/
(v) The CDM Validation and Verification Standard (VVS) version 3.0/22/ and the CDM Project Standard (PS) version 3.0/23/
(vi) Relevant decisions, guidance, and clarifications of the CMP and CDM Executive Board and any other information and references relevant to the project activity's reported emission reductions.

The verification has considered both the quantitative and qualitative aspects on stated/reported emission reductions. The monitoring report (all versions) and corresponding supporting documentation was assessed in accordance with the rules defined by UNFCCC and GS4GG, as appropriate to the PoA. The verification is not meant to provide any consulting or recommendations to the CME/others. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

Verification Process

The verification process is conducted as per internal GS4GG Requirements, which includes the following steps:

a) Contract with CME and appointment of verification team and technical review team (refer Section B.1 and B.2 of this report)
b) Desk review (refer Section D.1 of this report) of Monitoring Report and corresponding ER sheet by verification team and remote visit (including sampling approach (refer Section D.4 of this report) to be applied) /35/
c) Remote audit (refer Section D.2 of this report) by verification team consistent of Team Leader and all Technical Experts, as a minimum/35/
d) Follow up activities e.g., interviews (refer Section D.3 of this report)
e) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft verification report (refer Section D.5 of this report)
f) Independent technical review (refer Section B.2 of this report) of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet and evidence)
g) Reporting and closure of TR comments/findings (refer Section D.5 of this report) (CARs/CLs/FARs) and final approval for the decision made (refer Section G and H of this report).
h) Issuance of final verification report to contracted CME (or authorized representatives) and submission of request for issuance, as appropriate.

Verification Conclusion

Based on the outcome of the verification process of VPA 5 "Efficient and Clean Cooking for households in Democratic Republic of Congo" of GS PoA "ECOA_BURN multi-country Clean Cooking Programme", for the monitoring period 04/04/2023– 13/05/2024 (inclusive of both the dates), we confirm that the implementation of referenced registered PoA and its VPA 5 is complying with applicable CDM and GS4GG rules and regulations as stated in the Monitoring Report (final) Version 1.1, dated 20/09/2024/4/. The GHG emission reductions were calculated inline with the approved baseline and monitoring methodologies TPDDTEC – "Technologies and Practices to Displace Decentralized Thermal Energy Consumptions, Version 3.1"/6/ and the monitoring plan contained in the registered PoA-DD/1/ and VPA-DD/2/.

Earthood Services Private Limited (hereafter referred as "Earthood") is able to certify that the emission reductions from the VPA 5 (GS 11433) "Efficient and Clean Cooking for households in Democratic Republic of Congo" of registered PoA (GS 10789) "ECOA_BURN multi-country Clean Cooking Programme" during the period 04/04/2023–13/05/2024 (inclusive of both the dates) amounts to 128,685 tCO_2e. Therefore, this is being submitted for request for issuance, as per GS4GG requirements/19/ and UNFCCC procedures.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	Remote-site inspection	Interviews	Verification findings
1.	Team Leader	IR	Phukan	Sukanya	Central office	Y	Y	Y	Y
2.	Verifier (Trainee)	IR	Singh	Kishlay	Central office	Y	Y	Y	Y
3.	TA Expert (TA 3.1)	IR	Phukan	Sukanya	Central office	Y	Y	Y	Y
4.	Local Expert	EI	Kasiho	Emmanual	Central office	N	Y	Y	N

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	Vashisht	Sushant	Central Office
2.	Technical Expert (TA 3.1)	IR	Guleria	Shifali	Central Office
3.	Approver	IR	Singh	Kaviraj	Central office

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Erroneous transfer of information from documented records (POs, sales records, etc.) to ER sheet/database.	Low	The documents also undergo regular internal checks to ensure the accuracy of data entry.	The records are checked on a sampling basis such that the information verified from database has low uncertainty within acceptable limits and is substantiated by remote observations.

2.	Error in applying the formulae in the emission reduction calculation sheet	Low	The calculation method has been prescribed in the applied methodologies and further detailed in the registered PoA-DD. There isn't any complex equation involved in the ER calculations. Also, the internal check ensures that such errors are identified in advance.	The emission reduction calculation sheet/5/ has been reviewed in detail by the assessment team. Each step for the calculation has been thoroughly checked to confirm the final numbers as well as the steps involved both computationally as well as, in accordance with the methodological requirement.

C.2. Consideration of materiality in conducting the verification

All errors were individual errors and no extrapolation of errors in the final calculation of ERs was required. The verification team confirms that the final ERs/5/ are free from material errors with a reasonable level of assurance.

No.	Particulars/Monitoring Report	MR Version (Initial)	MR Version (Revised/Final)
1.	Emission Reduction Achieved (tCO2e) in this monitoring period	128,804	128,685
2.	Applicable Threshold (%) as per GS4GG VVS for Pas version 1.0	2.0%	2.0%

The change in the achieved ERs from the initial and final versions of the MR is due to the application of the conservative approach for the value of certain parameters. VVB has planned and conducted this verification in line with the requirements stipulated in para 9.6.7 and 9.6.8 of the VVS. Since the achieved ERs are less than 300,000 tonnes of carbon dioxide equivalent per year, the threshold of 2% has been considered as per para 9.6.3.c of the GS4GG Validation and Verification Standard v1.0.

SECTION D. Means of verification

D.1. Desk/document review

The verification is performed primarily as a desk review of the documents submitted at various stages of assessments. The review is performed by the assessment team using dedicated protocols (checklists). The assessment team cross checks the information provided in the documents (MR)/4/ and information from sources other than those used, if available, and conducts independent background investigations. Earthood conducted a desk review as under:

1. A review of the data and information presented to verify their completeness.
2. A review of the monitoring plan (as described in VPA-DD) /2/, the monitoring methodology including applicable tool(s) and, where applicable/06/, the applied standardized baseline, paying particular attention to the frequency of measurements, and the quality assurance and quality control procedures

3. A review of calculations and assumptions made in determining the GHG data and emission reductions/4//5/.
4. An 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

The list of documents reviewed during the verification is provided under appendix 3 of this report.

D.2. Remote-site inspection

Duration of Remote-site inspection: 20/08/2024- 21/08/2024			
Activity performed for Remote site	**Site location**	**Date**	**Team member**
• Opening Meeting: Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the audit including venue for closing meeting and any concerns from PP. • Implementation and operation of project activity (project boundary, technology, project equipment, monitoring and metering equipment) as per registered PDD/previous verification. • Management and monitoring procedures followed at the project site. • Physical inspection of the project activity: Site visit and interview of monitoring personnel • Management and operational system: Documentation, allocation of responsibilities, qualification and training, data recording &archiving, internal audit and management review and emergency procedures. • Verification checklist: compliance of monitoring procedures followed at project site with registered PDD and monitoring methodology. • Review of monitored data and relevant document in accordance with registered monitoring plan and applied monitoring methodology. • Review of ER calculations in accordance with applied methodology and relevant tools. • Compilation of the audit findings. • Closing Meeting: Submission of the audit findings to the client and agreement on the issues raised and agreement on timelines.	Democratic Republic of Congo	20/08/2024-21/08/2024	Sukanya Phukan, Kishlay Singh, Emmanuel Kasiho (LE)

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
CME Representatives						
01	Toledano	Laura	BURN, Project Manager	20/08/2024 - 21/08/2024	VPA implementation, ER Sheet calculations, Monitoring procedures, Monitoring surveys Trainings and Stakeholder inputs	Sukanya Phukan, Kishlay Singh, Emmanuel Kasiho (LE)
02	Gachugi	Nathan	Head of Carbon Operations-Africa-BURN			
03	Tshimanga	Joe	BURN Carbon assistant			
04	Mazambi	Jonathan	Burn MFC			
05	Gakii	Sally	BURN, Senior Carbon Technical Officer			
06	Otolo	Natasha	Carbon Manager			
End Users - Usage Survey						
1.	Simwerai	Jospin	End-user of ICS	21/08/2024 20/08/2024-	The range and extent of questions asked during the survey is presented in detail in the ensuing sections in section D.3.1	Sukanya Phukan, Kishlay Singh, Emmanuel Kasiho (LE)
2.	Azama	Félicita	End-user of ICS			
3.	Stanislas	Furaha	End-user of ICS			
4.	Bugoma	Aron	End-user of ICS			
5.	Kabila	Fidèle	End-user of ICS			
6.	Izabayo	Conso	End-user of ICS			
7.	Marie	Thérèse	End-user of ICS			
8.	Bukuru	David	End-user of ICS			
9.	Tumaini	Olivier	End-user of ICS			
10.	Noela	Mustapha	End-user of ICS			
End Users - Kitchen Performance Test						
1.	Kapinga	Dorcas	End-user of ICS	20/08/2024 - 21/08/2024	The range and extent of questions asked during the survey is presented in detail in the ensuing sections	Sukanya Phukan, Kishlay Singh, Emmanuel Kasiho (LE)
2.	Kamundele	Akili	End-user of ICS			
3.	Bahisha	Etienne	End-user of ICS			

4.	Kita	Abou	End-user of ICS		in section D.3.1	
5.	Kavugho	Esther	End-user of ICS			
6.	-	Brigitte	End-user of ICS			
7.	Mbutu	Nicole	End-user of ICS			
8.	Mulamba	Ruth	End-user of ICS			
9.	Thérèse	Stamili	End-user of ICS			
10.	Fatima	Naomie	End-user of ICS			

D.3.1. Type of questions asked to end-user by the Verification Team members.

The respondents in the Project Monitoring Survey were asked about their demographics as follows, in order to establish their identities stated in the survey conducted earlier by the PD/CME as mentioned in MR/4/ and survey sheets/14/

1. Name
2. Address with zip code
3. Date of Birth
4. Phone Number

No.	Questions asked by Team member as part of Project Monitoring Survey
1.	What is the UIN of the Cookstove you received?
2.	Do you recall being visited by BURN enumerators about the use of the Jikokoa stove? (If yes, date/ year of survey)
3.	How many BURN Jikokoa stoves do you own that are in use for cooking food in your household?
4.	Any other ICS received from other CME(s)? (If yes, name of CME).
5.	Is the Jikokoa in use/ operational?
6.	Is the baseline/ old stove still in usage?
7.	Fuel used in project stove (BURN Jikokoa)?
8.	Source of the fuel (eg: biomass or charcoal) (nearby area/ forest/ local market/etc.)?
9.	Any smoke reduction?
10.	Any difference in cooking between rainy season and dry season?
11.	Any idea about how to get in touch with BURN in case you need to be assisted on the use of the stove? E.g. phone number, email or location of the BURN office nearby you?
12.	Any other remarks (less fuel consumption, bigger stove etc.)
13.	Users were also asked how they got benefitted from the installation of project stove; for example: reduction in the smoke level or indoor air pollution, Price of fuel, efficient cooking (fuel usage) & effect of season on fuel source and type. This covers the VVB's assessment on safeguarding principles, SDG assessment and stakeholder inclusivity.

All the end-users reported that the product is working satisfactorily, and they feel that there has been an improvement in the indoor air quality. All the end users also reported that they are aware of the grievance mechanism. No adverse or negative responses were received regards the usage or convenience of use of stoves. All the end users reported 100% usage of the stove which substantiated the usage rate reported in the ER sheet/05/ and the MR/04/.

D.4. Sampling approach

CME's Sampling Approach

CME will follow sampling procedures given in Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 3.1/6/ for determining the sample size of each parameter. A confidence precision of 90/30 will be ensured by CME for meeting the annual/biennial monitoring criteria. The sampling approach undertaken by CME is duly explained under section B.7.2 of the VPA-DDs/2/, which has been assessed by the verification team and found to be correct and in-line with the TPDDTEC v3.1/6/.

VVB's Sampling Approach

The Sampling and surveys for Sampling and surveys for CDM project activities and programmes of activities Version 09.0 /25/ states under paragraph 28 that "When the project participants or the coordinating/managing entity have applied a sampling approach, the DOE may apply acceptance sampling as described in the steps indicated below as part of validation/verification activities". The validation team has conducted acceptance sampling for the baseline consumption of the fuel with the help of baseline survey in line with paragraph 30 and 31 of the sampling standard version 9.0/25/.

As per para 39 of the sampling standard version 9.0/25/, "A DOE may select a different sample size than the one indicated in paragraph 32 above either by choosing a different value for the

consumer risk and producer risk (e.g., 20 per cent for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply:
(a) The estimated volume of annual GHG emission reductions of the project activity or the PoA being verified is equal to or less than 100,000 t CO2eq.
(b) The security conditions in the project region prevent inspection of many samples (eg. conflict zones); or
(c) 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."

The PoA is located in Democratic Republic of Congo, which is an LDC. Thus, the verification team can choose a different sample size than the one indicted in para 32 of the sampling standard/25/.

The verification team selected random sample of CME's sampled records to check the acceptability (or otherwise) of the data for each such record with CME's sample records and determined if the CME's sample records meet the requirements.
The verification team selected the sample size as 08 households for the purpose of onsite inspection to check the acceptability of CME's sampling results or otherwise.

Sample Size: (Per region)

AQL	UQL	Producer Risk	Consumer Risk	Sample Size; Min	Acceptance No.
0.5%	20%	10%	20%	8	0

Since remote audit was conducted, therefore VVB has verified 10 samples from VPA per technology to confirm the description of baseline technology, fuel type, number of devices framework in line with PoA and inclusion eligibility conditions stated in the VPA-DD/2/. This is in accordance with 4.1.1.e. of the 'Site Visit and Remote Audit Requirements and Procedures Ver 2.0' as per which in case of remote site visits "the samples size that VVB audits shall be 10% more than the minimum required sample size." Also, VVB has considered 2 households extra as backup for the purpose of remote site inspection to check the acceptability of CME's sampling results or otherwise.
The verification team covered a total of 20 samples (10 In person usage survey and 10 KPT). These samples were picked by the VVB from the 163 and 60 samples covered by the CME during the usage survey and the KPT survey respectively.
There was no material errors identified that might have resulted in the overestimation of the SDG impacts.

In line with GS Site Visit requirement/28/, para 4.1.1(b) remote verification can be conducted for PoA if the ERs are less than 200,000 tCO_2e in total. Given that the ERs reported for the current MP for the VPA is 128,685 tCO_2e and a physical audit was conducted by the VVB during the previous MP, a remote audit was deemed appropriate by the VVB. Further the risk assessment for the project has been done majorly by desk review of documents provided before the site visit. The site visit risk assessment is as following:

i. **Risks related to organizational and procedural aspects**: Since the remote audit for VPAs was mainly to check the baseline scenario, VVB confirmed that the internet connectivity during the site visit to be adequately good to check the baseline device and understanding the baseline scenario in the households. Further, the remote audit was conducted by the validation team which included the auditor who is a GS approved auditor and technical area expert for the sectoral scope 3. Hence it was found adequate.
ii. **Risks related to the project activity and its configuration, which present project-specific risks:** Most of the risk on the project activity was already assessed during the desk review of the VPAs. Further all the VPAs included in the validation are from the same locations as of the real case VPAs under the same PoA. VVB during the site visit also confirmed the locations of the baseline users are the same as for the planned distribution areas (to urban and peri urban households all over the territory of the DRC
iii. **Risks related to monitoring aspects:** As this is inclusion of the regular VPAs, VVB has

checked and confirmed the baseline scenario through desk review and also confirming it during the interview with the PD personnels during the remote audit. There was no material errors identified that might have resulted in the overestimation of the SDG impacts."

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General			
Compliance of the monitoring report with the monitoring report form	-	-	-
Remaining forward action requests from previous verification	-	-	
Specific-case VPA(s) considered for verification and covered in this report	-	-	-
Programme of activities		-	
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan in a registered PoA-DD (including its generic VPA-DD(s))	-	-	-
• Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline	-	-	-
• Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic VPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case VPAs in the PoA	-	-	-
• Types of changes specific to afforestation and reforestation activities	-	-	-
Voluntary project activities			

Compliance of the VPA implementation with the included VPA design document	CL#01	-	-
Post-registration changes	-	-	-
• Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline	-	-	-
• Corrections	-	-	-
• Changes to the start date of the crediting period	-	-	-
• Inclusion of a monitoring plan to an included VPA-DD	-	-	-
• Permanent changes to the monitoring plan as described in the included VPA-DD, applied methodology, or applied standardized baseline	-	-	-
• Changes to the programme design of the included VPA-DD	-	-	-
• Types of changes specific to afforestation and reforestation component project activities	-	-	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	-	-	-
• Data and parameters monitored	CL#01 CL#02	CAR#01 CAR#02	FAR#01
• Implementation of sampling plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	FAR#01
Assessment of data and calculation of emission reductions or net removals	-	-	-
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	-	-	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-	-	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA	-	-	-
• Remarks on difference from estimated value in registered VPA-DD	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Local stakeholder consultation	-	-	-

Others (please specify): ER Sheet	-	CAR#01	-
Total	**02**	**02**	**1**

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	VVB checked from the Gold Standard website that the prescribed form has been used for preparing the Monitoring Report/4/. The CME used the Gold Standards for Global Goals latest MR template version 1.1/16/ available on the GS webpage and all the details were filled as per the MR template filing guidelines. /4.1/
Findings	No findings were raised.
Conclusion	The verification team confirms the compliance of the monitoring report with the latest version of the GS monitoring report template and the instructions therein for filling out the form.

E.2. Remaining forward action requests from validation and/or previous verifications

None.

E.3. VPAs considered for verification and covered in this report

Title and GS reference number of the VPA included in the PoA as of at the end of this monitoring period	Is the VPA considered for this verification? (yes/no)	Version of the VPA-DD/ PoA-DD	Confirmation that a request for issuance including the VPA has been published for the previous monitoring period (Y/N)
GS11433 Efficient and Clean Cooking for households in Democratic Republic of Congo (VPA 5)	Yes	Version 2.6; Version 4.1	Y

E.4. Programme of activities

E.4.1. Compliance of the programme implementation with the registered programme design document

Means of verification	The PoA (with GS ID: GS10789) entitled 'ECOA_Burn multi country Clean Cooking Programme' involve the distribution of Improved Cookstove (ICS) in Democratic Republic of Congo, where the ICS limit the degradation of air quality and also reduces the fuel consumption. The VPA under consideration (with GS ID: GS11433) for this verification entitled 'Efficient and Clean Cooking for households in the Democratic Republic of Congo – VPA 05' involves the distribution of ICS for domestic usage. The CME of the PoA is Burn Manufacturing Co. manages the distribution and monitoring of the ICS. The implementation of this VPA is within the geographical boundary of DRC in line with PoA-DD/1/. The assessment team confirms that the distribution of

cookstoves has been done only in the boundary of Democratic Republic of Congo (DRC) (physical boundary) and therefore the geographical boundaries of the implemented PoA is in line to the registered PoA-DD/1/.

In this VPA, Jikokoa highly efficient improved charcoal cookstoves manufactured by Burn Manufacturing LLC were distributed. This has been confirmed through the photographs/18/ and remote site sample survey of VVB/35/.

The technical specifications of the ICS are mentioned in the following table:

Stove Manufacturer	BURN
Stove Model	Jikokoa G3.5 - classic
Stove Type	Charcoal Stove

Materials

Stove Body	CRCA Carbon Steel painted high gloss black epoxy powder coat
Pot Rest	Stainless Steel
Burning Chamber	Stainless Steel
Ash Tray	Aluzinc
Feet	Stainless Steel

Measurements

Height	cm	24.4 cm
Diameter (stove top)	cm	26.0 cm
Weight	kg	4 kg
Fuel Chamber Volume	cm^3	954 cm^3
Packaging Dimensions	cm	29.0 L x 28.5 W x 25.1 H

WBT Results

Parameter	**Unit**	**Value**
High power thermal efficiency (average of cold start and hot start)	%	48.1%
Firepower	kW	2.05
Boil Time	Minutes	27.72

Lifetime

Warranty	2 years
Estimated Lifetime[3]	7 to 10 years

Further, based on the review of records of distribution by CME/7/, remote observations and interview conducted during the remote audit, the verification

team confirms that:

- The VPA is implemented within the boundary of the PoA as described in the Registered PoA-DD/1/.
- The CME is the same as that mentioned in the registered PoA-DD/1/.
- The Implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PoA-DD/1/and Registered VPA-DD/2/
- All physical features of the VPA proposed in the VPA-DD/2/ are in place. The information (including data and variables) as mentioned in the MR/4/ is found to be in line with the details provided in the PoA-DD/1/

The information in the MR/4/ is determined to be consistent with the specifics in the registered VPA-DD/2/. The verification team found that the project description contained in MR/4/ is complete and accurate and was found to be in-line with the PoA-DD/1/ and VPA-DD/2/.

Grievance Mechanism:

i. The grievance mechanism involves recording the complaints from the beneficiaries by the field staff to the household on a regular basis in a logbook/13/ which is maintained at the registered office. During the current monitoring period, no grievances were received which was verified as a part of remote visit/35/ assessment and upon checking the logbook/13/.

The year wise distribution as verified by the VVB from the ER Sheet and distribution database is as follows:

Year of Distribution	Distributed stoves	VVB Assessment
2020	40	The VVB has verified the values from the Distribution Database/7/ and the values are found to be consistent in the MR/4/.
2021	7,315	
2022	12,643	
Total	**19,998**	

There are total 19,998 ICS distributed under the VPA till the end of the current crediting period as verified by the VVB from the distribution database.

Findings

CL#01 was raised and resolved.

Conclusion

The verification team can confirm that all physical features (technology, project equipment, and monitoring and metering equipment) of the registered VPA were in place and that the CME operated the project activity in accordance with the registered VPA-DD/2/ and VPA-Inclusion Report/36 during the current monitoring period and based on the information verified through the remote audit and interviews/35/.

During the current monitoring period, emissions were reduced by 128,685 tCO_2e. The following values SDGs were attained in this monitoring period by VPA:

Sustainable Development Goals Targeted	SDG Impact	Amounts Achieved	Units/Products

SDG:13 Climate Change	Emission Reductions	128,685	VERs (tCO2e)
SDG:1 End poverty in all its forms everywhere	Monetary savings related to the purchase charcoal	46.38%	Equivalent monetary savings in %
SDG:3 Ensure healthy lives and promote well-being for all at all ages	Perceived air quality	100%	Measurement of user perceptions between the baseline and project scenario: smoke levels, incidence of coughing, incidence of respiratory illness, and incidence of itchy eyes
SDG:4 (Quality Education) Ensure equal access for all women and men to affordable and quality technical, vocational, and tertiary education, including university	Number of people receiving skill development training	70	Number of people who participated in project training
SDG:5 (Gender Equality) Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household	Average time saving associated with cooking in the project scenario	67	Average time saved cooking for women in the project scenario (measured in minutes reported by end-user)

SDG:7 Ensure access to affordable, reliable, sustainable and modern energy for all	Number of sold/distributed	17,998	Number of sold/ distributed ICS in use
SDG:8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	No. of jobs created	66	Number of local jobs created
SDG:15 (Life on land) **Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally**	Total non-renewable biomass saved	63,443.65	Tons of non-renewable biomass saved in the project scenario from continued use of project technologies

E.4.2. Implementation and operation of the management system

Means of verification	BURN offered stoves directly to end users or through dedicated distributors. The stove distribution and data gathering processes were explained to distributors. The CME runs and manages an electronic data management system that keeps and tracks information on all efficient cooking methods covered by the VPA. The following information will be recorded in the database at a minimum using a cloud-based web platform (Kobo Collect): • Unique serial number (USN) of the ICS • Date of shipment to distributor/ retailer • Name of distributor/ retailer • Quantity of ICS distributed • Geographic area (state) of distributor/ retailer • Model type of ICS Furthermore, the distribution database will include end-user contact information (name, state, mobile number, or national ID number) from at least ten times the survey and field test sample size (including usage surveys

for each age of product) to ensure an adequate end-user pool from which random sampling can be applied. End-users must register their end-user details through SMS or phone call in order to claim the ICS warranty.

Each ICS's USN will be connected to a sales date (recorded during distribution) or shipment date in the sales database. Thus, for any monitoring period, the duration of time for which the stoves included in the emissions reduction estimates are deemed operational can be calculated. If, for example, a stove has been operational for 180 days, the full-year operating percentage is 0.493 (=180/365 days). The stove will be counted as operational (= start crediting) from the next day following distribution or after a conservatively calculated period of time from the date of shipment. The sum of all appliances' operational fractions determines the equivalent full-time appliances for the monitoring period.

The USN has the following format comprising of 9 digits

1st digit	2nd digit	3rd	4th	5th	6th	7th	8th	9th
Product ID	100000th	10000th	1000th	100th	10th	Random	Random	1st
ID	S1	S2	S3	S4	S5	R1	R2	S6

Each section on the USN will identify the product as follows:

- Product type: the first digit identifies the stove type (Jikokoa)
- Production number: S1 to S6 are digit slots for a sequential numbering ordered by time of production, allowing for 1 million unique serial numbers.For instance, the first stove off the line would have "000000" for its S1-S6digits.
- Random digits: R1 and R2 are 2 random digits placed in slots 7 & 8, to make the USN unpredictable to outside parties

The USN during the initial implementation of the VPA was a 9-digit alphanumerical sequence in line with the registered PDD, which was subject to changes in the future implementation. Hence, 6-digit USN was also observed in the current monitoring period which is found to be acceptable by the VVB considering the uniqueness of the sequence and no duplicate entries were observed by the VVB.

The enumerators or data collectors are also provided with training and guidance from time to time to make them adept at sampling and collection of data from field into Kobo Collect system. This was verified from their training records/37/. The organizational structure and monitoring roles and duties are consistent with the situation on the ground, as validated by interviews with CME representatives during remote site audit and interviews/35/. As a result, the verification team confirms that the structure is adequate.
During the remote site audit, the implementation and operation of the management system were also checked with end-users. As a result, the verification team confirms that the distributed ICS were punched with Unique IDs to avoid double counting, which was found to be consistent with the information in the distribution database /7/. Furthermore, the remote site visit for the VPA5 during the second verification confirmed the CME management system is in place with the registered VPA05.

<table>
<tr><td></td><td>The year wise implementation of the VPA is as follows:

<table>
<tr><th>Year of distribution</th><th>Sales</th><th>VVB Assessment</th></tr>
<tr><td>2020</td><td>40</td><td rowspan="4">The VVB has verified the values from the Distribution Database/7/ and the values are found to be consistent in the MR/4/.</td></tr>
<tr><td>2021</td><td>7,315</td></tr>
<tr><td>2022</td><td>12,643</td></tr>
<tr><td>Total</td><td>19,998</td></tr>
</table>

During the current monitoring period 10,185 stoves have been distributed by the CME which has been verified by the VVB from the distribution database/7/.</td></tr>
<tr><td>Findings</td><td>No findings were raised.</td></tr>
<tr><td>Conclusion</td><td>The verification team assessed the management systems in place to implement the monitoring of the PoA. This included the roles and responsibilities, data collection, transfer and aggregation procedures, data storage and archiving for the monitoring system. The roles and responsibilities data collection transfer and aggregation procedures, data storage and archiving for the monitoring system have been provided in the MR /4/. The verification team confirms that the monitoring management system of the VPA and by extension PoA is in place with the responsibilities properly identified and established as per the revised approved PoA-DD/1/.</td></tr>
</table>

E.4.3. Post-registration changes

E.4.3.1. Corrections

Not Applicable

E.4.3.2. Inclusion of a monitoring plan

Not Applicable

E.4.3.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

Not Applicable

E.4.3.4. Changes to the programme design

Not Applicable

E.4.3.5. Addition of CPA inclusion template

Not Applicable

E.4.3.6. Change of coordination/managing entity

Not Applicable

E.4.3.7. Changes specific to afforestation and reforestation activities

Not Applicable

E.5. Voluntary project activity

E.5.1. Compliance of the VPA implementation with the included VPA design document

Means of verification

The VPA titled 'Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)' aims to replace traditional, aims to replace traditional inefficient cookstove in Democratic Republic of Congo. The ICS aims to reduce pollution caused by inefficient use of biomass during cooking. In contrast to baseline stoves such as traditional (three stone) cook stoves, metal cookstoves the ICS are more efficient as they emit fewer emissions and require less fuelwood. The VPA also aims to deliver other environmental and SDG benefits associated with the ICS. The implementation of the VPA as mentioned above is within the geographical boundary of PoA-DD/1/ and VPA-DD/2/, which has been verified during the remote site visit and interviews/35/. The CME of the PoA is Burn Manufacturing Co. manages the distribution and monitoring of the ICS. Under the VPA, VPA implementer is selling the cookstove manufactured by Burn Manufacturing LLC with the model's name being 'Jikokoa' which are intended to use wood as fuel. A total of 19,998 ICS was distributed from the start date of this VPA. The ICS distributed during the current monitoring period (04/04/2023 – 13/05/2024) has been considered for monitoring and ER calculation, which were 19,998 ICS. The number of ICS deployed under the VPA has been confirmed by the distributed record database/7/. Further, based on the review of records of distribution by VPA implementer, remote observations and interviews conducted during the remote audit/35/, the verification team confirms that:

- The VPA implemented within the boundary of the PoA as described in the revised accepted PoA-DD/1/.
- The CME and VPA Implementer is the same as that mentioned in the PoA-DD/1/ and VPA DD/2/.
- The implementation and operation of the project activity has been conducted in accordance with the description contained in the PoA-DD/1/ and VPA-DD/2/.
- All physical features of the VPA proposed in the VPA-DD/2/ are in place.

To avoid double counting, other registries like CDM, VCS along with GS has been verified and confirms that the project is only registered under GS registry.

VVB has conducted a remote site audit for the VPA and each of the interviewed end users had only one ICS. Further, the monitoring survey provided by the PP was reviewed by the VVB. No end users were observed with more than 1 ICS. Hence, stove stacking was not observed in the VPA.

VVB has reviewed the lag time calculation sheet/41/ and the start date calculation sheet/42/ for the VPA. They are found to be acceptable. Hence, the VVB confirms that the start date of the project activity is correctly identified and mentioned in the MR.

This verification report covers the monitoring period from 04/04/2023 to 13/05/2024 (inclusive of both the dates). An overview of all field project activities is provided in the table below as verified in the verification report/3/:

Date	Activity
23/12/2020	Project start date (Start of stove distribution)
24/12/2020	Start of project crediting period
13/05/2024 – 20/07/2024	Usage/ Monitoring Survey

	21/05/2024 – 09/07/2024 | Project KPTs
Findings	No findings were raised.
Conclusion	The verification team is of the opinion that physical features of the VPA have been implemented in accordance with the VPA-DD/2/. • It is also confirmed, through the review of the supporting documentation, that physical features of the component VPA have been implemented in accordance with the VPA-DD /2/. • The VPA was also found to be completely operational in line with the VPA-DD /2/. • The information provided in the relevant sections of the monitoring report are appropriately describe the implementation and operational status of the PoA.

E.5.2. Post-Design Certification changes

E.5.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

Not Applicable

E.5.2.2. Corrections

Not Applicable

E.5.2.3. Changes to the start-date of the crediting period

Not Applicable

E.5.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

With Reference to the proposed design change, the following permanent changes have been proposed in relation to the sustainable development goals:
CME has included 3 new SDGs under the VPA in addition to the previously monitored SDGs i.e. SDGs 1,3,7, 8 and 13. The newly included SDGs are SDGs 4, 5 and 15. Their monitoring approach has been reviewed by the VVB in the revised VPA-DD submitted by the CME and the approach is deemed appropriate. Hence, the design change in the VPA 5 is deemed acceptable by the VVB. Kindly refer Appendix 5 of this report for VVB assessment on Design Change.

E.5.2.5. Changes to project design of approved project

There are no changes made during this monitoring period.

E.5.3. Compliance of the registered monitoring plan with applied methodologies and standardized baselines

Means of verification	The monitoring plan contained in the VPA-DD /2/ was reviewed in relation to the monitoring requirements of the applied methodology, TPDDTEC, version 3.1 /6/, as well as the PoA DD /1/, bearing in mind the technology involved. In light of the review conducted, it was found that the monitoring plan in the VPA-DD/2/ contains all the required parameters to be monitored in the context of the VPA design and description and allows determination of emission reductions according to the PoA-DD/1/ and applied methodology/6/. No standardized baseline was applied, which is in-line with the documented information in the registered PoA-DD/1/.
Findings	No findings were raised.
Conclusion	The monitoring plan is in accordance with the applied methodology, Gold Standard Simplified Methodology Technologies and Practices to Displace

	decentralized thermal Energy Consumption (TPDDTEC), v3.1/6/ that is included in the PoA-DD/1/ and VPA-DD/2/

E.5.4. Compliance of monitoring activities with the registered monitoring plan

E.5.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	RelevantSDG Indicator	Parameter	Value applied	Assessment
	13: Climate Action	$EF_{b,CO2}$ (CO2 emission factor arising from use of fuel wood in baseline scenario)	112 tCO_2/TJ	The value of parameter has been sourced from 2006 IPCC default/38/. The value is found to be in line with the VPA- DD/2/. The parameter is consistent between the MR/4/ and ER calculation sheet/5/. Hence, foundacceptable.
	13: Climate Action	$EF_{b,non-CO2}$ (Non-CO2 emission factor arising from use of fuel wood in baseline scenario)	9.46 tCO_2/TJ	The value of parameter has been sourced from 2006 IPCC default/38/. The value is found to be in line with the VPA- DD/2/. The parameter is consistent between the MR/4/ and ER calculation sheet/5/.Hence, found acceptable.
	13: ClimateAction	Wood-to-charcoal conversion factor	6 Kg firewood/ kg charcoal	This value of parameter has been sourced from IPCC default value (https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf) 9page 1.45)/32/. The value mentioned in the Monitoring Report/4/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/. The applied value is correct and justified.

	13: ClimateAction	$EF_{p,CO2}$ (CO2 emission factor arising from use of fuel wood in project scenario)	112 tCO_2/TJ	The value of parameter has been sourced from 2006 IPCC default volume 2, Chapter 2: Stationary Combustion, Table 2.5 /30/. The value is found to be in line with the VPA-DD/2/. The parameter is consistent between the MR/4/ and ER calculation sheet/5/. Hence, found acceptable.
	13: ClimateAction	$EF_{p,\ non-CO2}$ (Non-CO2 emission factor arising from use of fuel wood in project scenario)	9.46 tCO_2/TJ	The value of parameter has been sourced from 2006 IPCC default, volume 2, chapter 2 (Table 2.9). /30/. The value is found to be in line with the VPA- DD/2/. The parameter is consistent betweenthe MR/4/ and ER calculation sheet/5/. Hence, found acceptable.
	13: ClimateAction	NCVb (Net calorific value of the fuel wood used in baseline)	0.0156 TJ/ton of fuel wood	The value of parameter has been sourced from 2006 IPCC default, chapter 1: Introduction, Table 1.2 - Default net calorific values Default IPCC values for wood/wood waste are applied/15/. The value is found to be in line with the VPA- DD/2/. The parameter is consistent betweenthe MR/4/ and ER calculation sheet/5/. Hence, found acceptable.
	13: ClimateAction	NCVp (Net calorific value of the fuel wood used in project scenario)	0.0156 TJ/ton of fuel wood	The value of parameter has been sourced from 2006 IPCC default, chapter 1: Introduction, Table 1.2 - Default net calorific values Default IPCC values for wood/wood waste are applied/15/. The value is found to be in line with the VPA- DD/2/. The parameter is consistent betweenthe MR/4/ and ER calculation sheet/5/. Hence, found acceptable.

	13: ClimateAction	$f_{NRBi,y}$ (Non-renewability status of woody biomass fuel in scenario i during year y)	0.73998 fraction	The value of parameter has been Based on the study conducted by C4 EcoSolutions (Pty) Ltd. dated 22 January 2021/39/. The value is found to be in line with the VPA- DD/2/. The parameter is consistent betweenthe MR/4/ and ER calculation sheet/5/. Hence, found acceptable.
	13: ClimateAction	$P_{b,y}$ (Quantity of charcoal that is consumed in baseline scenario b during year y)	1.35748 t/household/year	The value of this parameter was cross checked with the baseline kitchen performance test (KPT). The calculation steps and the attendant references in the excel sheet were checked. The sample mean of the daily consumption of charcoal is 3.7191 kg/HH/day which is a statistically determined value at 90/30 confidence interval/precision, derived based on the 3 consecutive days of charcoal consumption when the KPT was conducted. The standard deviation of the sample obtained is 0.35kg from a revised sample size of 190 from 201. This effectively removes overestimation of fuel estimation in baseline by eliminating the outliers i.e., consumption exceeding 1.76kg in the household in the observational period of 3 consecutive days. The value mentioned in the Monitoring Report/4/ and Emission Reduction Spreadsheet /5/ are consistent with the approach given in VPA-DD wherein it is recommended to establish baseline fuel usage for VPA at the time of verification/2/. Hence the applied value is correct and justified.

Findings	No findings were raised
Conclusion	The values of the fixed parameter are found to be in line with the registered VPA-DD and hence are found to be acceptable.

E.5.4.2. Data and parameters monitored

SDG13: Technologies in the monitoring Database for project scenario p through year y, $N_{p,y}$, Number

Relevant SDG Indicator	**SDG13: Climate Action**	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	This parameter is measured continuously
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/
	Monitoring equipment	BURN keeps records of all distributed ICS in an electronic database. The basic data recorded inn KoboCollect database includes following information/7/: • Unique serial number (USN) of the ICS • Date of shipment to distributor/ retailer • Name of distributor/seller • Quantity of ICS distributed • Geographic are (state) of distributor/ retailer • Model type of ICS Other than this, the distribution database will also contain end-user contact details (name, state, mobile number, or national ID number) of atleast 10 times the survey and field test sample size (including usage surveys for each age of product), to ensure an adequate end-user pool to which random sampling can be applied. To claim the ICS warranty, end-users must register their end-user details through SMS or call.
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	Value applied for this monitoring period is 19,998 and This data is verified by checking the records of the KoboCollect cloud-based database excel spreadsheets download /7/
	If applicable, has the reported data been cross-checked with other available data?	VVB has conducted a remote audit where 20 end users were interviewed regarding the usage of the ICS and all the end users reported having functional ICS since day

		1 and hence the value reported in the MR is found to be acceptable by the VVB. VVB has further reviewed the verification report of the previous MP/03/ and the value is therefore deemed appropriate by the VVB.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The QA/QC processes were deemed to be appropriate and trustworthy.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
Findings	No findings were raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology /6/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG13: Quantity of fuel consumed in project scenario p during year y, $P_{p,y}$ in t/household/year

Relevant SDG Indicator	**SDG13: Climate Action**	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	The parameter is measured and recorded at least once every two years (biennial)
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/
	Monitoring equipment	This value is derived statistically based on surveys in project scenario, adopting minimum 3 consecutive days of charcoal consumption by the sampled household. The Technical Specifications for the same are as follows: Wood Moisture Meters: Size: 144 x 64 mm Material: ABS Accuracy: Soil 0.5% Measuring Temperature Range: -20 to 70 degrees Celsius Digital Weighing Scales:

		SKU GE840HL0TGA9SNAFAMZ Weight (kg): 0.5 Main Material: Plastic
	Calibration frequency /interval:	The VVB has reviewed the purchase order of the monitoring equipment, and it is observed that both the instruments are newly purchased and therefore no calibration was done. However, VVB has raised a FAR to confirm the calibration frequency and validity of the instruments during the subsequent verification of the VPA.
	How were the values in the monitoring report verified?	The value applied for this parameter is 0.5635 and this value is based on kitchen performance test carried out from 13/05/2024 to 20/07/2024 by the PD. The 4 consecutive day consumption of the charcoal by the sampled household is calculated using 90/30 rule. The purpose of the calculation is to find the mean value of charcoal consumption which is as close to the population mean as possible. The calculation behind this was verified from the project KPT mentioned in the ER Sheet /05/. Since, for the project KPT, 90/30 confidence/ precision was followed and precision attained was 5%, the mean value was considered for ER calculation. The calculation steps, and the applicability with the methodology/06/ was ascertained and found that the value calculated was conservative. So, the computation is conservative and does not overestimate the charcoal consumption which in turns underestimates the emission reduction
	If applicable, has the reported data been cross-checked with other available data?	VVB has conducted remote audit to confirm the value where 20 end users were interviewed by the VVB (10 end users from usage survey + 10 from KPT survey). All the end users reported using around 1.5 to 2 kgs of charcoal per day. Further, VVB has reviewed other registered projects in DRC to cross-check the value reported in the MR and ER sheet. The value is found to be well within the range reported in the registered projects (https://platform.sustain-cert.com/public-project/2550, https://platform.sustain-cert.com/public-project/2555). Therefore, the value reported for the VPA is found to be acceptable by the VVB.

	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The QA/QC processes were deemed to be appropriate and trustworthy. At the outset of each research, the equipment used in KPT is calibrated. Section E.5.7 of this report discusses calibration information. Personnel in charge of carrying out KPT studies are properly trained to supervise data collection and identify any inaccuracies in reported statistics. The moisture meter and weighing scale used were new, and VVB verified this by reviewing the sales receipt provided as evidence. However, the calibration could not be confirmed as no calibration certificates were available.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
Findings	No findings were raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology/6/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.	

SDG13: Usage rate in project scenario p during year y determined on a sampling basis, $U_{p,y}$, percentage

Relevant SDG Indicator	**SDG13: Climate Action**	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	Annually
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/
	Monitoring equipment	The Technical Specifications for the same are as follows: Wood Moisture Meters: Size: 144 x 64 mm Material: ABS Accuracy: Soil 0.5% Measuring Temperature Range: -20 to 70 degrees Celsius

		Digital Weighing Scales: SKU GE840HL0TGA9SNAFAMZ Weight (kg): 0.5 Main Material: Plastic
	Calibration frequency /interval:	The VVB has reviewed the purchase order of the monitoring equipment, and it is observed that both the instruments are newly purchased and therefore no calibration was done. However, VVB has raised a FAR to confirm the calibration frequency and validity of the instruments during the subsequent verification of the VPA.
	How were the values in the monitoring report verified?	This value of 90% is ascertained through annual surveys about the usage of the stoves in the project scenario. The value obtained during this monitoring period is 90%. This value was accepted after checking the user habit survey results /14/provided by the CME. It is to be noted that BURN has a robust system to ensure that the end users are constantly in touch and at the same time engage the field staffs to ascertain the grievances and rectify them to ensure that the intended beneficiary does not drop off from the program owing to assimilation barrier experienced due to new technology adoption. To achieve a Good Practice utilization as per "GS Requirements and Guidelines: Usage rate Monitoring"/40/, rate of up to 90%, field team training, end-user training and follow-ups, and an awareness campaign are all necessary. Before distribution, sensitization seminars are organized to explain how the stove works, and each participant receives a guide along with the stove CME also have a call center that follows up on stove recipients' experiences with the stoves. In addition, the field team conducts continuing monitoring operations in the field to verify data quality is up to standard, which serves to encourage stove users to use the stoves and gives them the opportunity to raise questions about the stoves. This was further cross checked with the desk review of documents and through interviews during the remote site visit/35/.
	If applicable, has the reported data been cross-checked with other available data?	Not Applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Not Applicable as the data is based on surveys and interviews with the beneficiaries
	In case project participants have temporarily not	Not Applicable

	monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	
Findings	CL#02 was raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the monitoring plan/2/ (as per measurement methods and procedures to be applied) and applied methodology/6/. The monitoring results were recorded consistently as per the frequency in the monitoring plan/2/.	

SDG13: Leakage in project scenario p during year y, $LE_{p,y}$, tCO2e/year

Relevant SDG Indicator	**SDG13: Climate Action**	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	At least once every two years (biennial)
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	The verified value in this monitoring period was assessed to be: 0 There are 5 ways in which the leakages can occur in this project activity The displaced baseline technologies are reused outside the project boundary in place of loweremitting technology or in a manner suggesting moreusage than would have occurred in the absence of the project. Non-project users who previously used loweremitting energy sources use the non-renewable biomass or fossil fuels saved under the projectactivity. The project significantly impacts the NRB fraction within an area where otherCDM or VER project activities account for NRB fraction in their baselinescenario. The project population compensates for loss of the space heating effect of inefficient technology by adopting some other form of heating or by retaining some use of inefficient technology. By virtue of promotion and marketing of a new technology with high efficiency, the project stimulates substitution within households who commonly used a technology with relatively lower

		emissions, in cases where such a trend is not eligible as an evolving baseline. However, all the five conditions can be discounted as follows: The displaced baseline technology is the most common and easily available cooking method in the project area and most of households usually sale off the old stove as scrap metal or throw it away upon purchase of ICS. It is highly unlikely that displaced baseline technology is reused outside the project boundary. Project users have to spend money for the charcoal. It can be excluded that the fuel saved by the project would be given for free by the project users and used by non-project users who previously used lower emitting energy sources The project is too small that it would have significant impact on the NRB fraction. Besides, demand for charcoal in Congo is continuously rising. Since, alternative fuels (like LPG or electricity) are out of reach for many people. Hence, the share of NRB remains high and it will not have a leakage impact on other carbon projects in Congo. The climate conditions for most of the areas in Congo do usually not require space or room heating. It is very unlikely that the charcoal ICS would be used for space or room heating. This can be confirmed through annual monitoring surveys The project's target group is households using charcoal. It is highly unlikely that households using electricity for cooking would use the project technology. Thus, leakage can be excluded. The calculation steps involved in the sampling method was cross checked and assessed and found to be correct.
	If applicable, has the reported data been cross-checked with other available data?	Not applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The QA/QC processes were deemed to be appropriate and trustworthy.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by	Not Applicable

	Appendix 1 to the CDM Project Standard?	
Findings	No findings were raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology /6/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG1: Monetary savings related to the purchase of charcoal, Percentage.

Relevant SDG Indicator	**SDG 1: End poverty in all its forms everywhere**	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	This parameter is measured on annual basis
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/
	Monitoring equipment	Not applicable. The value reported is based on direct calculation results from the usage survey. Carrying out surveys (either site visits or telephone surveys) to check on the money spent for purchasing charcoal in the project scenario compared to the baseline scenario
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	The verified value in this monitoring period was assessed to be 46.38% and the reduction in fuel consumption is verified from the usage survey conducted/07/. Further, VVB interviewed 20 end users regarding the usage of the ICS to which all the end users reported 100% usage. Therefore, the value is deemed acceptable by the VVB.
	If applicable, has the reported data been cross-checked with other available data?	The value of the parameter has been cross checked with similar registered projects in the host country (https://platform.sustain-cert.com/public-project/2550, https://platform.sustain-cert.com/public-project/2555) to confirm the usage of ICS in DRC. The value reported in the MR for VPA5 is found to be appropriate and therefore deemed acceptable by the VVB.

	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The QA/QC processes were deemed to be appropriate and trustworthy.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
Findings	No findings were raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology /6/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG3: Perceived Air Quality, %

Relevant SDG Indicator	**SDG 3: Good Health and Well Being**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	Measuring /Reading /Recording frequency	Biennial (Every two years)
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency in line to the GS4GG transition annex /29/ and VPA-DD /2/.
	How were the values in the monitoring report verified?	Since the ICS distribution reduces the indoor air pollution, the number of beneficiaries under this VPA5 are considered to have achieved this SDG target. The records checked for SDG1 No poverty i.e., the records of number of VPA ICS distributed/7/ in monitoring database, ex-post monitoring survey records/5/ were used for this parameter as well. The value obtained was found to be consistent. The verified value is: 100%
	If applicable, has the reported data been cross-checked with other available data?	Monitoring database records, Usage surveys
	Does the data management ensure correct transfer of data and reporting of emission reductions and are	The QA/QC processes were deemed to be appropriate and trustworthy.

	necessary QA/QC processes in place?	
Findings	No findings were raised.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.	

SDG4: Number of people who participated in project trainings, Number

Relevant SDG Indicator	**SDG 4: Number of people receiving skill development training**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	Measuring /Reading /Recording frequency	Annual
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency is in line to the GS4GG rules/28/ and VPA-DD /2/.
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The project records like training records and participants lists for the current monitoring period were checked to find out the number of people trained per year. BURN has a transparent data analysis and reporting system to keep a track of the people trained each year. The value is used for reporting on sustainable development of the project. The verified value is 70.
	If applicable, has the reported data been cross-checked with other available data?	Not Applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The QA/QC processes were deemed to be appropriate and trustworthy.
	In case project participants have temporarily not monitored the parameter,	Not applicable

	has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	
Findings	No findings were raised.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/, GS4GG rules/27/ and VPA-DD/2 /. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.	

SDG5: HHTS, Time Saving per Households, %

Relevant SDG Indicator	**Average time saving associated with cooking in the project scenario (Gender Equality)**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	Measuring /Reading /Recording frequency	This parameter is measured on annual basis
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The value applied for the parameter is 67%. The assessment team confirmed the value from the usage habit survey/14/. The value is used for monitoring of SDG 5 and monitored by asking the users if they have been able to save time with the use of improved stove. The end-users selected through acceptance sampling were also checked for the details mentioned in the database. The information was found to be consistent between thedatabase and VVB survey.
	If applicable, has the reported data been cross-checked with other available data?	Not Applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are	The QA/QC processes were deemed to be appropriate and trustworthy.

	necessary QA/QC processes in place?	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not applicable
Findings	No findings were raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology /6/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG7: Number of sold/ distributed ICS in use, Number

Relevant SDG Indicator	**SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	Measuring /Reading /Recording frequency	Continuous
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency is in line to the GS4GG rules/28/ and VPA-DD /2/.
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The project records like contracts, payment slips, employee list, database/ sales records or Monitoring Survey Records/14/ were checked to find out the number of ICS in use. To calculate the value the total number of ICS sold/distributed is summed up in the database and multiplied with usage rate. The verified value is 17,998.
	If applicable, has the reported data been cross-checked with other available data?	Not Applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are	The QA/QC processes were deemed to be appropriate and trustworthy.

	necessary QA/QC processes in place?	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not applicable
Findings	No findings were raised.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.	

SDG8: Number of people directly employed by the project, Number.

Relevant SDG Indicator	**SDG8: Decent Work and Economic growth**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	Measuring /Reading /Recording frequency	Annual
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency is in line to the GS4GG rules/28/ and VPA-DD /2/.
	Monitoring equipment	Direct measurement based on employment numbers of those employed directly by the project
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The project records like contracts, payment slips, employee list or others were checked to identify as part of the assessment. Since the data collection is robust as stated above, and the source is primary, the value of 66 people being employed was verified/12/.
	If applicable, has the reported data been cross-checked with other available data?	Not Applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are	The QA/QC processes were deemed to be appropriate and trustworthy.

	necessary QA/QC processes in place?	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not applicable
Findings	No findings were raised.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/, GS4GG rules /28/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.	

SDG15: Reduced non-renewable biomass consumption attributed to charcoal savings, Tons.

Relevant SDG Indicator	**SDG15:**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	Measuring /Reading /Recording frequency	Annual
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency is in line to the GS4GG rules/28/ and VPA-DD /2/.
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The achieved target for this SDG is calculated as as a function of specific fuel savings for an individual technology multiplied by the total number of operational technologies (discounted for usage rate in the monitoring period) and the non-renewable Biomass fraction in Nigeria. Since the data collection is robust as stated above, and the source is primary, the value of 63,443.65 tons of charcoal being saved was verified. The value is monitored as direct measurement based on project database, monitoring and usage surveys.
	If applicable, has the reported data been cross-	Not Applicable

	checked with other available data?	
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The QA/QC processes were deemed to be appropriate and trustworthy.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	NA
Findings	No findings were raised.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/, GS4GG rules /28/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.	

E.5.5. Implementation of sampling plan

Means of verification	The sampling plan was implemented by the CME in accordance with the Gold Standard methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 3.1/6/, and the CDM EB 110, Annex 1, Standard for Sampling and Surveys Sampling and surveys for CDM project activities and programmes of activities v.9.0/25/. **<u>Monitoring/ Usage Surveys and Project KPTs</u>** Data collecting for the usage/monitoring survey took place from May 13th to July 20th, 2024. The BURN team educated a team of 57 Enumerators for data collection to ensure comprehension of usage/monitoring needs, data collecting technique, and special KPT requirements. The carbon team from BURN's headquarters in Kenya and an external carbon consultant trained the Congo main staff, which included team leaders and project managers. This team then trained a local team of 57 surveyors who were fluent in the local language and culture. The training was appropriately geared to use surveys/KPTs and included an interactive discussion of questions with surveyors, going over the usage survey questionnaire (data collecting form) and KPT questions, role plays, and interview procedures. The usage monitoring surveys and KPT households were visited between 13th May 2024 – 20th July 2024. **Sampling frame** The sampling frame for the usage/monitoring survey and project KPTs consisted of households registered in BURN's sales database/7/ with end-user details (such as location, phone number, and so on).

Sampling Method
The simple random sampling method was applied.
A random generator was used to choose registered households at random. The matching stoves were then picked from the database using random numbers, and their information was found and contacted by phone to arrange bookings for availability for physical visits and KPTs, as well as doing telephone usage surveys.

Sample Size
A total of 223 surveys were carried out in this monitoring period. Three age group are chosen to conduct Usage surveys, WBTs and KPTs.

In person Surveys
In person surveys were conducted for the purpose of both the usage/monitoring survey, collection of KPT stoves. Data was collected by trained enumerators who spoke the local language. All households visited had the following evidence:

GPS coordinates

Photographs showing general kitchen area

The sampled households for KPTs were asked prior to conducting the KPT whether they use the stove. Since KPTs are only to be conducted on operational stoves.

Results

Usage Survey

Type of survey	Period of survey	Actual number of samples conducted	Achieved precision
Usage/monitoring survey	13/05/2024 to 20/07/2024	163	Not applicable. Minimum sample size of 100

Usage Survey Result

Age Cohort	Sample Size	Achieved Usage Rate	Usage Rate Applied – "Good Practice"
Entire Sample	163	**98.16%**[1]	**90%**
Age Group – 1 – 2	49	100.0%	90%
Age Group – 2 – 3	84	98.81%	90%
Age Group – 3 – 4	30	93.3%	90%

Kitchen Performance Test

[1] Weighted average of the achieved usage rates , weighted by sample sizes.

Type of survey	Period of survey	Actual number of samples conducted	Achieved precision
KPT	May 2024 to July 2024	60	5%

KPT Results

Fuel Type	Metric Applied	Result	Unit
Charcoal	Mean value	0.56354	ton/hh/year
Firewood	Mean value	0.00	ton/hh/year
LPG	Mean value	0.00	ton/hh/year
Kerosene	Mean value	0.00	ton/hh/year

Findings	No findings were raised.
Conclusion	The verification team confirmed that the sampling plan and the parameter values are in accordance with the monitoring plan provided in PoA DD/1/ and the VPA DD/2/.

E.5.6. Assessment of data and calculation of emission reductions or net removals

E.5.6.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

Means of verification

1- SDG-13: Climate Action

The equations used were found consistent with the revised accepted PoA DD /1/, revised accepted VPA DDs/2/ and the applied methodology TPDDTEC, version 3.1/6/

According to the methodology TPDDTEC, version 3.1, emission reductions without separate baseline, project or leakage emission shall be calculated as:

$ER_y = \sum b,p\ (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,\ fuel} * (f_{NRB,b,\ y} * EF_{fuel,\ CO2} + EF_{fuel,\ nonCO2})) - \sum LE_{p,y}$

Where,

$\sum b,p$	Sum over all relevant (baseline b/project p) couples
$N_{p,y}$	Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction)
$P_{p,b,y}$	Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests
$f_{NRB,b,\ y}$	Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario)

$NCV_{b,fuel}$	Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)
$EF_{b,fuel,CO2}$	CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel
$EF_{b,fuel,nonCO2}$	Non-CO2 emission factor of the fuel that is reduced
$LE_{p,y}$	Leakage for project scenario p in year y (tCO2e/yr)

Baseline emissions are calculated based on the baseline biomass consumption value shall be calculated as:

$ER_y = \Sigma_{b,p} (N_{p,y} * U_{p,y} * \underline{B_{,b,y}} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,nonCO2})) - \Sigma LE_{p,y}$

Where,

$\Sigma b,p$	Sum over all relevant (baseline b/project p) couples
$N_{p,y}$	Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction)
$\underline{B_{,b,y}}$	Quantity of fuel consumed in baseline scenario b during year y, in tons, as per by-default factors24 (cases with project performance field test only)
$f_{NRB,b,y}$	Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario)
$NCV_{b,fuel}$	Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)
$EF_{b,fuel,CO2}$	CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel
$EF_{b,fuel,nonCO2}$	Non-CO2 emission factor of the fuel that is reduced
$LE_{p,y}$	Leakage for project scenario p in year y (tCO2e/yr)

The total baseline are 220,230 tCO_2e.

b) **SDG-1:**

In the baseline scenario, it is estimated that households spend 100% in fuel for cooking, i.e., that there are no savings. The savings are a result of the implementation of the project activity.

c) **SDG-3:**

In the baseline scenario, it is estimated that 100% of the households suffer pollution-related inconveniences (such as smoke levels, itchy eyes and breathing problems).

Improved air quality is a result of the implementation of the project activity.

d) **SDG 4:**

In the baseline scenario, it is estimated that no trainings were held in the absence of the project, and therefore baseline value of zero is applied for the baseline.

e) **SDG 5:**

	In the baseline scenario, there are no time savings related to use of an ICS. Through the usage monitoring surveys, households were asked how much time is taken in minutes per day to prepare typical meals after using the project. f) **SDG-7:** In the baseline scenario, it is estimated that no improved cookstoves are implemented, hence the baseline value is zero. The distribution of improved cookstoves is a result of the implementation of the carbon project activity. g) **SDG-8:** In the baseline scenario, it is estimated that no jobs are being generated. Job creation is a result of the implementation of the carbon project activity. h) **SDG 15:** In the baseline scenario, 108,476.02 tons of non-renewable biomass are consumed. This is a calculated value which is a function of: Number of ICS * Weighted average Usage rate*Baseline Fuel consumption* f_{NRB} Detailed assessment of all the parameters used to calculate emission reductions is provided under section E.5.4.2. The calculations presented in the Monitoring Report /4/ and the corresponding ER sheet /5/ were found appropriate and complying with provisions prescribed in the registered monitoring plan/1/ of the respective revised accepted VPA-DD/2/, PoA-DD/1/ and applied methodology/6/.
Findings	No findings were raised.
Conclusion	The verification team verified that a) A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated under Section E.5.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet /5/ of final Monitoring Report /4/. b) The information provided in the monitoring report was cross checked with other sources, wherever appropriate and available, and such information is also included under Section E.5.4.2 of this report. c) The calculations of baseline emissions as presented in the corresponding ER calculations sheet /5/ of final Monitoring Report /4/ were checked and found to be consistent with the formulae and methods described in the monitoring plan of VPA-DD /2/, registered PoA-DD /1/ and the applied methodology/6/. d) All assumptions used in the emission calculations were found appropriate and therefore justified. e) Appropriate emission factors, IPCC default factors and other reference values have been correctly applied. This has also been elaborated under Section E.5.4.1 of this report. f) No standardized baseline was prescribed in the registered PoA-DD /1/.

E.5.6.2. Calculation of project value or estimation of project situation of each SDG Impact

Means of verification	a) **SDG-13:**

The transparent ex-post calculations of the outcomes of SDG 13 (i.e., CO2e reductions) are provided in a separate excel spreadsheet uploaded to GS registry for the performance certification review.

The methodology directly provides the following equation for emission reductions; without separate baseline, project or leakage emission reduction equations.

$$ERy = \sum b,p\ (Np,y * Up,y * Pp,b,y * NCVb,\ fuel * (f\ NRB,b,\ y * EFfuel,\ CO2 + EFfuel,\ nonCO2)) - \sum LEp,y$$

Where,

$\sum b,p$	Sum over all relevant (baseline b/project p) couples
$N_{p,y}$	Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction)
$P_{p,b,y}$	Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests
$f_{NRB,b,\ y}$	Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario)
$NCV_{b,fuel}$	Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)
$EF_{b,fuel,CO2}$	CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel
$EF_{b,fuel,nonCO2}$	Non-CO2 emission factor of the fuel that is reduced
$LE_{p,y}$	Leakage for project scenario p in year y (tCO2e/yr)

$$ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,y} * NCV_{b,\ fuel} * (f_{NRB,b,\ y} * EF_{fuel,\ CO2} + EF_{fuel,\ nonCO2})) - \sum LE_{p,y}$$

$\sum b,p$	Sum over all relevant (baseline b/project p) couples
$N_{p,y}$	Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction)
$P_{p,b,y}$	Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests
$f_{NRB,b,\ y}$	Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable

	biomass (drop this term from the equation when using a fossil fuel baseline scenario)
$NCV_{b,fuel}$	Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)
$EF_{b,fuel,CO2}$	CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel
$EF_{b,fuel,nonCO2}$	Non-CO2 emission factor of the fuel that is reduced
$LE_{p,y}$	Leakage for project scenario p in year y (tCO2e/yr)

Results from this monitoring period shows that in MPIII, the project has achieved 91,544 tCO_2e emission reductions.

b) **SDG-1:**

The monitoring of SDG 1 has been made through a qualitative evaluation of a sample of households during the usage/monitoring survey (either site visits or telephone surveys) to check on the money spent for purchasing charcoal in the project scenario compared to the baseline scenario. Results from this monitoring period show that in average the monetary savings are 46.38% related to the purchase of charcoal in the project scenario.

c) **SDG-3:**

The monitoring of SDG 3 has been made through a qualitative evaluation of a sample of households during the usage/monitoring survey (either site visits or telephone surveys) to check on the pollution-related in conveniences (such as smoke levels, itchy eyes and breathing problems) in the project scenario compared to the baseline scenario. Results from this monitoring period show that 100% of respondents perceive air quality improvements at their homes since purchasing and cooking with the project stove as compared to the baseline.

d) SDG-4:

The number of people trained in this monitoring period is, 70 members of staff (casual/contract). Participant lists have been provided as support documents.

e) SDG-5:

The time savings achieved in relation to cooking time between the project and baseline scenario was calculated based on results from the Usage monitoring survey and the baseline surveys. Households reported on average time savings of 67 minutes per day.

f) SDG-7:

The parameter 'project technologies in use' has been calculated as part of the outcome calculation for SDG 13 and is provided in the separate ER calculation excel spreadsheet. The eligible project technology days are multiplied with the usage rate (Up,y) to determine the 'project technologies in use'. In this monitoring period, the project technologies in use have been calculated as 17,998.

g) SDG-8:

	The number of created jobs has been determined for the respective years of the monitoring period. Both Casual and Contract employees have been considered for this parameter. An employee list has been provided as a supporting document. In the current monitoring period, 66 people were employed. **h) <u>SDG-15:</u>** The tons of non-renewable biomass saved in the project scenario from use of project ICS was achieved by calculation of baseline Tons of NRB and Project NRB. The exact approach is as follows: Number of ICS * Up,y * Ppby * fNRB.The result achievement in the project resulted in savings of 63,443.65 tons of non-renewable biomass saved in this monitoring period. VVB confirms that the CME has carried out Usage surveys in line with the Applied Methodology and the associated guidelines/6//40/. The resulting usage rate from this sampling exercise provides information on what the likely non-operational rate of cookstoves is. By applying the Usage rate to the total stove Population, the VPA accounts for any non-operational cookstoves across the database/7/.
Findings	No findings were raised.
Conclusion	The verification team verified that a) A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated under Section E.5.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet /5/ of final Monitoring Report /4/. b) The information provided in the monitoring report was cross checked with other sources, wherever appropriate and available, and such information is also included under Section E.5.4.2 of this report.

E.5.6.3. Calculation of leakage

Means of verification	The 5 conditions under which the leakage should be accounted for is not observed in this project activity. The detailed discussion on the same is provided in section E.5.4.2 above under the parameter: SDG13: Leakage.
Findings	No findings were raised.
Conclusion	A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated under Section E.5.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet /5/ of final Monitoring Report /4/. The information provided in the monitoring report was cross checked with other sources, wherever appropriate and available, and such information is also included under Section E.5.4.2 of this report.

E.5.6.4. Calculation of net benefits or direct calculation for each SDG Impact

Means of verification	**SDGs Targeted**	**SDG Impact**	**Baseline estim**	**Project estimate**	**Net benefit**

		ate		
13	Climate Action	220,230	91,544	128,685 tCO_2e VERs
1	No Poverty	0 %	46.38%	46.38%
3	Good Health and Well-being	0 %	100 %	100 %
4	Ensure equal access for all women and men to affordable and quality technical, vocational, and tertiary education, including university	0	70	70
5	Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household	130	63	67
7	Ensure access to affordable, reliable, sustainable and modern energy for all	0	17,998 end-users	17,998 end-users
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	0	66	66
15	Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	108,476.02	45,032.37	63,443.65

The calculation methods applied for all the SDG impacts were checked with the registered PoA-DD/1/ and VPA-DD/2/.
The verification team confirms that the stated figures were checked and found acceptable.

Findings	No findings were raised.
Conclusion	The verification team confirms that: a) The complete data was available and is duly reported b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.4 of this report). c) Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project emissions and leakage emissions were followed d) Appropriate emission factors, IPCC default factors and other reference values were correctly applied. e) The total number of VERs achieved during the current monitoring period is 128,685 tCO_2e.

E.6. Comparison of actual SDG Impacts with estimates in approved PDD

Means of verification

From Section E.5 of the Monitoring Report, it is apparent that estimated values were off while the project monitored its progress.

SDGs Targeted	SDG Impact	Values estimated in ex ante calculation of approved PoA-DD for this monitoring period	Actual values achieved during this monitoring period
13	Climate Action	136,893 tCO_2e VERs	128,685 tCO_2e VERs
1	No Poverty	45.20%	46.38%
3	Good Health and well being	98.94%	100%
4	Number of people receive training	N/A	70
5	Gender Equality	N/A	67
7	Affordable and clean energy	18,000	17,998
8	Decent work and economic growth	25	66
15	Total non-removable biomass saved	N/A	63,443.65

As per the registered VPA-DD, 136,893 tCO_2e were expected to be reduced within a time frame of 04/04/2023 - 13/05/2024 (both days inclusive is 406 days). However, 128,685 tCO_2e VERs were reduced during the current MP which is 59.95% of the estimated ERs.

Findings

No findings were raised.

Conclusion

The actual emission reductions achieved in the current monitoring period for the VPA is lower than the emission reductions and equivalent for other SDG targets stated in the VPA-DD /2/. Therefore, it has been accepted by the verification team.

E.6.1. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

Means of verification

The Monitoring Report /4/ and corresponding ER calculations sheet /5/, show that the actual emission reductions achieved for project stove during this monitoring period are equivalent to those estimates provided in VPA-DD /2/.

Findings

No findings were raised.

Conclusion

No justification was sought from the PD because the achievement of emission reductions were lower than what had been estimated.

E.7. Stakeholder Inputs and Legal Disputes

E.7.1. Assessment of all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations

Means of verification	During the on-site visit by the VVB, the grievance logbook was checked, and it was confirmed that no complaints were registered for the current monitoring period. Additionally, VVB also interviewed the local villagers about their grievance. The complaints registered were resolved by the PD. The stakeholder interviews provide VVB with sufficient confidence that the grievances are taken into consideration and were found as duly resolved for the current monitoring period.
Findings	None
Conclusion	There were no stakeholder feedback or comments received during this monitoring period. The evidence was accepted by the verification team.

E.7.2. Report on any stakeholder mitigations that were agreed to be monitored.

Means of verification	There were no stakeholder mitigations that were agreed to be monitored during the current monitoring period.
Findings	None
Conclusion	Not Applicable

E.7.3. Details of any legal contest that has arisen with the project during the monitoring period

Means of verification	There were no legal disputes during the current monitoring period.
Findings	None
Conclusion	Not Applicable

SECTION F. Internal quality control

The draft verification report that is prepared by the verification team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable GS4GG requirements. The technical review team is collectively required to possess technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of the technical review team are independent of the verification team.

During the technical review process, additional findings may be identified, or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to Gold Standard. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that need to be resolved by the verification team. The decision taken by the Technical Reviewer is final and is authorized on behalf of Earthood Services Private Limited.

SECTION G. Verification opinion

Earthood Services Private Limited (Earthood), contracted by, has performed the independent verification of the emission reductions for the GS Project 10789 VPA5 "Efficient and Clean Cooking for households in Democratic Republic of Congo" in the host country "Democratic Republic of Congo" for the monitoring period 04/04/2023 to 13/05/2024 (both dates inclusive), as reported in the Monitoring Report, Version 1.1 dated 20/09/2024. The 'BURN' is responsible

for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. Earthood commenced the verification against the baseline and monitoring methodology "TPDDTEC – "Technologies and Practices to Displace Decentralized Thermal Energy Consumptions, Version 3.1", the monitoring plan contained in the VPA-DD and Monitoring Report Version 1.1 dated 20/09/2024.

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

The verification team confirms that:

- The PoA was found completely implemented as per the description given in the registered VPA -DD.
- The actual operation conforms to the description in the registered PoA - DD and VPA-DD

SECTION H. Certification statement

ESPL's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that the reported GHG emission reductions are fairly stated.
In our opinion, the GHG emissions reductions reported for the project activity are fairly stated in the Monitoring Report (final) Version 1.1 dated 20/09/2024. ESPL, based on outcome of verification activities, certifies in writing that, during the monitoring period 04/04/2023 to 13/05/2024 (inclusive of both the dates), the registered GS PoA "ECOA_BURN multi country Clean Cooking Programme" achieved the verified amount of 128,685 tCO_2e reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the PoA.
The verified amount of emission reductions is stated below as per implemented VPAs and as per commitment period:

Verified and certified emission reductions as per monitoring period:

Monitoring period	**Amount (tCO2e)**
From 04/04/2023 till 31/12/2023	86,213
From 01/01/2024 till 13/05/2024	42,472
Total	**128,685**

Appendix 1: Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Level
CAR	Corrective Action Request
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
CER	Certified Emission Reduction
CH_4	Methane
CL	Clarification Request
CME	Coordinating and Managing Entity
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO2	Carbon dioxide
COV	Coefficient of Variance
CPA	Component Project Activity
CP	Crediting period
DNA	Designated National Authority
ER	Emission Reductions
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GS4GG	Gold Standard for Global Goals
GPS	Geographical Positioning System
HH	Household
ICS	Improved Cook Stoves
IR	Internal Resource
IPCC	Intergovernmental Panel on Climate Change
Kg	kilogram
KPT	Kitchen Performance Test
MR	Monitoring Report
NCV	Net Calorific Value
PDD	Project Design Document
PoA	Programme of Activities
QA/QC	Quality Assurance/ Quality Control
RMP	Registered monitoring plan
RSV	Remote site Visit
TA	Technical Area (with in Sectoral Scope)
TR	Technical Review/er
TJ	Terra Joule
VCR	Verification and Certification report
VER	Verified Emission Reduction
VVS	Validation and Verification Standard
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Level
VPA/VPA-DD	VPA is for 'Verified Project Activity' (whereas DD stands for Design Document)
VVB	Validation and Verification Body
UNFCCC	United Nation Framework convention on Climate change
QA/QC	Quality Assurance and Quality control
GS4GG	Gold Standard for Global Goals

Appendix 2. Competence of team members and technical reviewers

Competence Statement (CDM)			
Name	Sukanya Phukan		
Education	M.Sc (Environmental Science and Technology) B.Sc (Zoology)		
Experience	-		
Field	Environment Science		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	20/09/2022
Approved by	Deepika Mahala (Technical Manager)	**Date**	20/09/2022

Competence Statement			
Name	Kishlay Singh		
Education	B.Tech (Civil Engineering) M.Tech (Environment Engineering)		
Experience	1 Year +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	10/07/2024

Approved by	Deepika Mahala (Technical Manager)	**Date**	10/07/2024

Competence Statement			
Name	Sushant Vashisht		
Education	M.Sc. Environmental science and Technology		
Experience	6 months		
Field	Environment science and technology		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	10/05/2022
Approved by	Deepika Mahala (Technical Manager)	**Date**	10/05/2022

Competence Statement			
Name	Emmanuel Kasiho		
Education	Master's in business administration B.Sc. Civil Engineering		
Experience	3+ years		
Field	Civil Engineering		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (Democratic Republic of Congo)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	26/07/2022
Approved by	Deepika Mahala (Technical Manager)	**Date**	26/07/2022

Appendix 3. Documents reviewed or referenced.

No.	Author	Title	References to the document	Provider
1.	BURN Manufacturing Co.	PoA-DD	Version 4.1 dated 13/10/2021	CME
2.	BURN Manufacturing Co.	VPA-DD	Version 2.6 dated 30/12/2022	CME
3.	ESPL	Previous verification report	Version 3.1 dated 17/06/2023	Others
4.	BURN Manufacturing Co.	Monitoring Report	Version 1.1, Dated 20/09/2024	CME
4.1	GS4GG	Monitoring report template Guide	Version 1.1, published on 14/10/2020	GS4GG
5.	BURN Manufacturing Co.	09SEP2024_GS10789_VPA 05_DRC_Ex Post ER Calculations MPIII	Dated 09/09/2024	CME
6.	The Gold Standard Foundation	The Gold Standard Simplified Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)	Version 3.1, Dated 25/08/2017.	Others
7.	BURN Manufacturing Co.	DRC Database Technology Days and Stoves (Kobo) & Project Monitoring Usage Survey	22/08/2024	CME
8.	BURN Manufacturing Co.	7JUNE2022Baseline Survey and KPT RT Urban Final	Dated 16/09/2022	CME
9.	BURN Manufacturing Co.	Checklist Ver	-	VVB
10.	BURN Manufacturing Co.	Manufacturers Specifications BURN Jikokoa Stoves	-	CME
11.	BURN Manufacturing Co.	31JULY2024 BURN Congo Employment List FINAL.xlsx	-	CME
12	BURN Manufacturing Co.	31JULY2024_GS10789_VPA 05_Training list Kinshasa 1AUGUST2024_GS10789_VPA 05_DRC_Training list Lubumbashi	-	CME
13	BURN Manufacturing Co.	Logbook	-	CME
14.	BURN Manufacturing co.	BURN GS PoA_10789_Monitoring Survey sheet v1.1-Jiko	-	CME
15.	IPCC	IPCC Guidelines for National Greenhouse Gas Inventories 1.2	2006	Others

16.	GS4GG	Form: GS-MR-FORM	Version 1.1, Dated 14/10/2020	Others
17.	BURN Manufacturing co.	fNRB Report	-	CME
18.	BURN Manufacturing co.	Photographs of Stoves	-	CME
19.	GS4GG	Principles and Requirements https://globalgoals.goldstandard.org/101-par-principles-requirements/	Version 1.2 Dated October 2019	Others
20.	BURN Manufacturing co.	GS_inclusion Letter BURN	-	CME
21.	BURN Manufacturing co.	ODA-Declaration.pdf	-	CME
22.	UNFCCC	VVS for PoA	Version 3.0	Others
23.	UNFCCC	PS for PoA	Version 3.0	Others
24.	UNFCCC	CDM guidelines for Sampling and surveys for CDM project activities and programmes of activities	Version 4.0	Others
25.	UNFCCC	Sampling and surveys for CDM project activities and programmes of activities	Version 09	Others
26.	UNFCCC	https://unfccc.int/cop7/documents/accords_draft.pdf	21/01/2002	Others
27.	GS4GG	Principle and requirements	Version 1.2	Others
28.	GS4GG	Site Visit and Remote Audit Requirements and Procedures	Version 2.0	Others
29.	GS4GG	Transition annexure	-	Others
30.	IPCC	2006 IPCC Guidelines for National Greenhouse Gas Inventories, volume 2, chapter 2 (Table 2.5)	-	Others
31.	The Gold Standard Foundation	Rule update (03/06/2021): Applicability of GWP for GS for the Global Goals Projects	Dated 03/06/2021	Others
32.	IPCC	Default IPCC value (2006 IPCC Guidelines for National Greenhouse Gas Inventories) is applied (https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ef3,ppdf 9page 1.45pdf)	-	Others
33.	IPCC	IPCC 2019 value (Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories), volume 2, chapter 4, Table 4.3.3	-	Others

34	UNFCC	Bonn Agreement and Marrakech Accords	-	Others
35	ESPL	Remote -site audit	20/08/2024-21/08/2024	-
36	BURN Manufacturing Co.	VPA inclusion report	=	CME
37	BURN Manufacturing Co.	Training Records	-	CME
38	IPCC	2006 IPCC Guidelines for National Greenhouse Gas Inventories	-	Others
39	Burn Manufacturing co.	C4 Eco-Solutions (Pty) Ltd.	22/01/2021	CME
40.	GS4GG	Requirements and Guidelines: Usage Rate and Monitoring v2.0	V2.0	Other
41.	BURN Manufacturing Co.	Lag Calculation sheet	-	CME
42	BURN Manufacturing co.	Start date calculation sheet	-	CME
43	GS4GG	Design Change Requirements	V1.1	Other

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FAR from validation/previous verification

FAR ID	01	**Section no.**		**Date : :** DD/MM/YYYY
Description of FAR				
NA				
Project participant response				**Date : :** DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				**Date :** DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	**Section no.**	B	**Date :** 02/09/2024
Description of CL				

1. According to Section A.1 on page 7, it is stated that a total of 19,998 stoves have been distributed. Section B.1 on page 10 indicates that the distributed stoves include both Jikokoa Classic and Jikokoa Xtra models. However, the 'DRC Assignments' tab reflects that all 19,998 stoves distributed are Jikokoa Classic. PP is requested to clarify.
2. In reference to Section D.3, 'Comparison of Monitored Parameters with the Last Monitoring Period,' PP is requested to clarify why the value for the parameter 'Equivalent Monetary Savings' obtained during the current monitoring period is lower than that of the previous monitoring period?

Project participant response	**Date :** 04/09/2024

1.PP has corrected section A.1 to only reflect Jikokoa Classic since the mention of Jikokoa Xtra was an error. 19,998 is in line with the total number of stoves distributed for the project as provided on the ER sheet tab (DRC Assignments".
2.The monetary savings have decreased for the current period due to the increase in charcoal prices as compared to the previous period. PP has included some references to support charcoal price increase which supports monetary reductions, *The price of charcoal in Beni, North Kivu, has nearly doubled over the past month due to scarcity and insecurity in the region. Vendors blame the high prices on a lack of access to forests, as insecurity has reduced the number of people harvesting wood. A bag of charcoal, which used to cost between 35,000 and 40,000 Congolese francs (12–14 USD), now sells for 90,000 Congolese francs (33 USD).*
Source; LINK
The price of charcoal in Kindu, Maniema province, has risen from 35,000 to 60,000 Congolese francs. This increase is attributed to three factors: the scarcity of charcoal due to its export to Goma, heightened taxes at various stages of production and transportation, and local farmers prioritizing agricultural activities over charcoal production. The demand for charcoal in Goma surged due to the influx of internally displaced persons from conflict areas, particularly those affected by M23 rebels.
Source; LINK
The price of a bag of charcoal has seen an alarming increase over the last three weeks in Kinshasa, going from 45,000 to 60,000 CDF, an increase of 15,000 CDF.

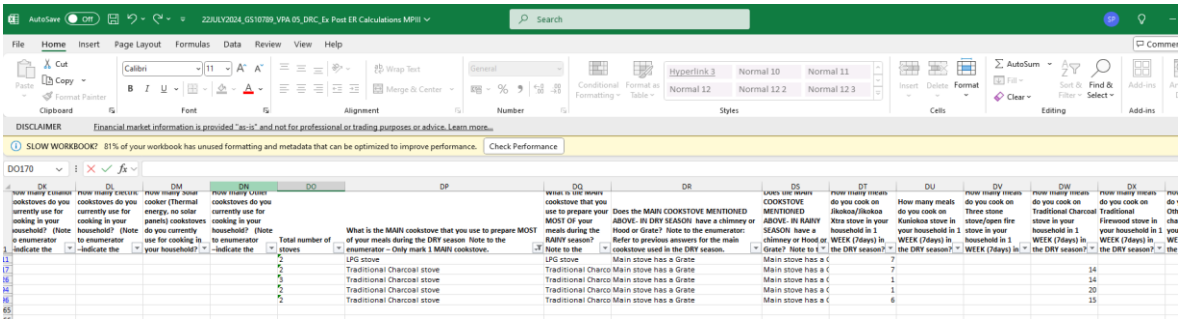
Documentation provided by project participant

VVB assessment	**Date :** 13/09/2024

VVB has assessed the clarifications made along with the evidence provided, all inconsistencies have been addressed and **CL#01 is closed.**

CL ID	02	**Section no.**	G	**Date :** 02/09/2024
Description of CL				

1. In section G.1 of the MR, PP has stated that there were no grievances or complaints received during the current MP. However, according to the ER sheet tab "KOBO Usage Survey Results", column AY, there were 44 end users who reported having issues with their ICS. PP is requested to clarify the same and further clarify whether these ICS were repaired or replaced, and the time taken to resolve the issues. PP is requested to clarify whether non-functional days of these ICS were accounted for during ER calculation. PP shall further provide grievance logbook records to confirm the grievances received during the current MP.
2. In ER sheet tab "KOBO Usage Survey Results", column DA, there were 19 end users who reported having 2 Jikokoas and 1 end user reported having 3 Jikokoas. PP is requested to clarify how was the need to provide additional ICS to these end users identified and how the PP ensured that ERs from all the ICS present in the same household were not accounted for during the current MP. PP is requested to provide evidence for the same. PP shall provide further clarification on whether the distribution of additional ICS to a single end user is in accordance with the registered VPA-DD and the applied methodology.-
3. In ER sheet tab "Usage Analysis", the number of end users reported from age group 2-3 yrs and 3-4 yrs are inconsistent with the tab "KOBO Usage Survey Results". Further, 2 end users from age group 2-3 yrs reported their traditional charcoal stove as their main stove and their usage as per column DT is 1 meal and 7 meals per week respectively. 1 end user from the same age group reported having LPG stove as the main stove and the frequency of cooking is 1 meal per day. Similar pattern was also observed for the age group 3-4 yrs. PP is requested to justify the usage rates calculated for these age groups given the above-stated conditions.



Project participant response	Date : 04/09/2024

1. Any concerns raised by end-users regarding stove repair and maintenance are systematically recorded by Burn in our Repair and Maintenance Tracker. It's important to note that reporting stove repair and maintenance issues is voluntary by the end-users. In accordance with GS requirements PP confirms that a grievance mechanism was set up in the design phase of the project comprising a phone number, location of grievance book and address, all which were communicated during LSC. The means of raising any grievances is also provided to the end-users at the point of sale.
   Burn has put in place the SOP detailing the step-by-step process of receiving any repair requests and repair process. The request for repairs come in through phone call, email, walk ins, SMS, WhatsApp, live chat, social media, product package. Once a request comes in, it is logged in the customer experience database and repair services provided.

   Currently, Burn has a separate system for logging in all repair requests, and the logbook which is used to record any grievances raised by the end-users such as complaints on harassment etc which are written down on the logbook itself. This grievance mechanism has been set up to address any complaints from end-users related to the use of the project stove.

   Reporting of these grievances is a voluntary act from the end-users, and it is end-user driven, thus no grievances were reported for this period. If any damaged stoves are identified during monitoring survey, they are immediately noted by PD for resolution. To ensure that that the end-users have a stove for use throughout, even if the initial issue was not reported by the user. PD would like to clarify that some households opt to continue using their stoves despite minor repair needs see column BY of KOBO Usage Survey Results as they don't consider the repair needs very critical for reporting, neither is their cooking interfered with. Based on tab KOBO Usage Survey Results column BN, 43 out of the 44 stoves show signs of use apart from the stove serial number "149395004". Column BY confirms that the 43 stoves have been used between "Today" and "Yesterday" and, columns DT confirms the meals cooked by the stoves further confirming that the stoves are in use. Based on usage surveys done, there was no evidence showing that the stoves were not used for any day, hence no days discounted.

2. In the TPDDTEC V3.1 PD confirms that, there are no restrictions regarding how many ICS stoves are needed to displace the baseline stoves however, conservatively, PP ensures only one ICS is credited per household as seen in tab Er calculations cell C40. The registered VPADD does not also specify the number of ICS stoves per household.
3. There are a total of 84 end-users (those using the stove more than 7 days a week), however as per this cell, 83 are users while 1 is a non-user see cell B40 below and tab KOBO Usage surveys results cell DT 28 where the burn stove is only used once hence a non-user. Additionally, there are a total of 30 end-users for age 3-4, of which, 28 are users based on the usage criteria of using burn stove 7 days a week while 2 are non-users (using burn stove 1 day a week and 6 days a week as per cells DT 94 and DT 96 respectively of tab KOBO Usage surveys results.

   As per usage survey guidelines section 2.2.3 "The project developer shall define project technology "use" versus "non-use" to determine who should be considered eligible for crediting. The definition and criteria applied to define "use" and "non-use" shall be documented in the
   Project Design Document (PDD) and may be amended with justifications during a given crediting period. Any revisions made shall be documented in the monitoring report along with the justifications".

   Section 2.2.4 further states "To define the use and non-use of project technology, the project developer should use the criteria such as time since last used, frequency of use, duration of use of cooking device, extent to which the traditional technology is displaced etc. The project developer should refer to baseline survey, project survey and Kitchen Performance Tests (KPTs) results to determine the representative cooking practices in the

project boundary and identify the criteria for defining use and non-use of project technology." *Based on this requirement, the project developer has defined user and non-user as "A user is defined as a household which uses the project stove for at least 7 meals per week and who indicates the last usage within a week. Those households, for which on-site observations in the kitchen do not indicate clear usage, will be defined as "non-user".* Usage surveys done used the criteria above where the only end-users counted as users are those who use their stoves to cook 7 meals per week as per column DT, those with stoves that show signs of use as per column BN and those who use their stoves for domestic use column AH. Based on this criteria PP has claimed 90% usage and end user meeting the following requirements (• Field team training and supervision • End -user training and follow ups • Awareness campaign), PD has claimed (best practice), even with stove stacking, as the project stove meets the usage criteria as per the guidelines. Any end-user who does not meet the criteria is automatically discounted.
Documentation provided by project participant
VVB assessment **Date :** 13/09/2024
1. The justification provided by the CME is deemed acceptable by the VVB. VVB has reviewed the repair and maintenance tracker provided by the CME and it is found to be appropriate. It has been further confirmed that the stoves of the end users were operational during the current MP. **Hence, the finding is closed.** 2. The justification provided by the CME is deemed acceptable. **Closed.** 3. **Closed.** **CL#02 is closed.**

Table 3. CAR from this verification

CAR ID	01	**Section no.**	ER Sheet	**Date :** 30/08/2024
Description of CAR				
1. In the 'ER Calculation' tab, the results reflect data from 2020-22 instead of the current monitoring period. PP is requested to update the data accordingly. 2. In the 'Sampling Steps' tab, cell G4 references Kenya Assignments instead of DRC Assignments. PP is requested to make the necessary correction. 3. In section D.4, for all the pictures included, please use time stamped images.				
Project participant response				**Date :** 04/09/2024
1.In the 'ER Calculation' tab, column D10, the years mentioned are in relation to the stove sales which are capped based on the end of the CP. However, ERs are claimed in relation to the duration of the current monitoring period see row 11 with the actual project technology days. 2.In the 'Sampling Steps' tab, cell G4 has been corrected to reference DRC Assignments. 3.All pictures included in section D.4 of the MR have been updated with those that have timestamp on them.				
Documentation provided by project participant				
VVB assessment				**Date :** 13/09/2024
VVB has assessed the revised ER sheet, and all inconsistencies have been addressed, hence **CAR#01 is closed.**				

CAR ID	02	Section no.	D	Date : 30/08/2024
Description of CAR				
1. In Section D.4, the data concerning how users learned to use the ICS indicates counts of 52 for information at point-of-sale, 43 for information by salesperson, and 0 for other sources. However, according to the 'KOBO Usage Survey Results' tab in the ER sheet, row JQ, these totals should be 56, 48, and 4, respectively. This discrepancy reduces the total to 150 instead of the correct 163. PP is requested to review and update. 2. In Section E.1, page 47, regarding SDG 15, the baseline scenario states the calculated value as 108,476.87 tons. However, both the calculations and the value in the 'SDG Calculation' tab, cell C28 of the ER sheet, indicate the correct value as 108,476.02 tons. Please update this accordingly.				
Project participant response				**Date :** 04/09/2024
1. In Section D.4 of the MR, the data concerning how users learned to use has been corrected to 56 for information at point-of-sale, 48 for information by salesperson, and 4 for other sources. 2. In Section E.1, page 47, regarding SDG 15, the correct value has been corrected as 108,476.02 tons.				
Documentation provided by project participant				
VVB assessment				**Date :** 13/09/2024
VVB has assessed the revised ER sheet and all inconsistencies have been addressed, hence **CAR#02 is closed.**				

Table 4. FAR from this verification

FAR ID	01	Section No.		Date : 20/09/2024
Description of FAR				
The calibration of the devices (wood moisture meters and digital weighing scales) could not be evaluated as the CME did not possess the calibration certificates. This will be verified during the next monitoring period.				
Project participant response				**Date :** DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				**Date:** DD/MM/YYYY

Appendix 5. Design Change Validation

Means of validation

Proposed Design Change:

CME has included 3 additional SDG targets i.e. SDG 4, SDG 5 and SDG 15 with the registered monitoring plan of the VPA in accordance with the registered PoA-DD. The design change carried out by the CME is in line with the GS Design Change Requirements/43/ and therefore in line with para 3.5.1 of the requirements, the change is deemed acceptable by the VVB. Addition of the 3 SDGs does not require an additional LSC by the CME in line with paragraph 4.5.1 of the GS Design Change Requirement/43/ as it does not have any potential impact on the stakeholders.

Assessment:

The SDG targets has been added by the CME in accordance with the registered PoA-DD/01/. The monitoring plan in the revised VPA-DD/02/ is correctly applied to the VPA. The monitoring plan has been found to be in compliance with the requirements of the applied methodology TPDDEC Version 3.1 /06/.

Additional SDGs targeted by the CME:

Sustainable Development Goals Targeted	SDG Description	SDG Impact Indicator (Proposed or SDG Indicator)	VVB Assessment
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university	Number of people receiving skill development training	By implementing this VPA, the employment conditions of the people of DRC will increase because of the skill development training. The same has been verified through the training attendance and photos/37/ shared by the CME.
5.Achieve gender equality and empower all women and girls	5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Average time saving associated with cooking in the project scenario	Implementation of this VPA will increase gender diversity and inclusivity in the region of DRC. The SDG were monitored through the monitoring surveys conducted by the CME/07/, where the end-users were asked question about the time saving in collection of firewood.

15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	Total non-renewable biomass saved	The use of the ICS technology in the VPA will create fuel savings, calculated as the aggregate difference in total charcoal/ firewood consumed for cooking activities in the project scenario as compared to the baseline scenario.

Data and parameters added:

Relevant SDG Indicator	Parameter	Value in VPA-DD	Frequency	Assessment
SDG 4	Number of people trained/ year	100	Biennially	The parameter has been added due to the addition of additional SDG 4. The parameter will be used to monitor the number of people that have been trained by the CME each year. The total number of people trained will be cross-checked through the training records and participation lists. The ex-ante value of the parameter has been determined by the CME through the trainings/37/ provided.
SDG 5	Average number of minutes saved while	80 Minutes	Biennially	The parameter has been added due to the addition of additional SDG 5.

	collecting firewood in project scenario				The parameter will be used to monitor the average number of minutes saved by the end-user while collecting firewood. An elaborate database will be maintained based on Statistical average of the end-user reported difference between the number of minutes spent collecting firewood in the project scenario compared to baseline conditions for similar meals. The estimated value of the parameter has been taken by the CME through MP1 verification of CMEs already registered GS Project (GS11433). The approach is found to be appropriate.
	SDG 15	Total amount of non-renewable fuel savings due to displacement or energy efficiency improvements of baseline technology	49,357.49 Tons	Annually	The parameter has been added due to the addition of additional SDG 15. The parameter will be used to monitor through the project KPTs, the fuel saving by the end-user after the project device. An elaborate database will be Computed as a function of specific fuel savings for an individual technology multiplied by the total number of operational technologies (discounted for usage rate in the

					monitoring period) and the non-renewable Biomass fraction in DRC. The detailed calculation of the same has been elaborated in the ER Sheet/05/, which has been reviewed and is found to be appropriate.

Changes to the monitoring plan:
Since the added SDGs are to be monitored annually, the monitoring plan has been modified by the CME to include the newly added SDGs. No major changes are observed in the monitoring plan and it is found to be in line with the applied methodology/6/.

Findings	No findings were raised.
Conclusion	The validation team confirms in-line with Design Change requirements that: • The changes in the revised VPA-DD are complete and accurate. • The actual changes comply with the relevant requirements of design change requirements, PoA Requirements and principle and requirements related to changes in the monitoring plan of the VPA. • The level of accuracy of the monitoring is not affected by the proposed changes.

Validation Opinion:

Earthood has been contracted by BURN Manufacturing Co. to perform a Design change validation for VPA titled 'GS10789 VPA5: Efficient and Clean Cooking for households in the Democratic Republic of Congo (DRC)' with GS ID: GS11433. The validation was performed in accordance with the GS4GG Design Change requirements, related Standards/Guidance and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

VVB, based on its assessment is of the opinion that the proposed Design Change inclusion of SDG targets will not impact the baseline, applicability of the applied methodology, compliance of monitoring plan and the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan.

The GS registered PoA will continue to result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change irrespective of the design change given the underlying assumptions do not change. In our opinion, the project meets all relevant GS4GG rules/requirements and all relevant host country criteria.

The proposed Design Change is thus being submitted to Gold Standard for approval.