Earthood

Verification report for GS4GG Programme of Activity (Gold Standard for the Global Goals)	
BASIC INFORMATION	
Title of the GS4GG Project	GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 2 GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3
GS ID of Project	GS 11640 GS 11861
Version number of the verification and certification report	1.1
Completion date of the verification and certification report	06/11/2023
Monitoring period number and duration of this monitoring period	1st monitoring period 30/03/2022 to 29/03/2023 (inclusive of both dates)
Version number of the monitoring report to which this report applies	1.3
Coordinating/managing entity (CME)	AGS Carbon Advisory
Project Representative(s)	SPOUTS International
Host Party	Republic of Uganda
Applied methodologies and standardized baselines	VPA 2: Methodology for Emission Reductions from Safe Drinking Water Supply, version 1.0 VPA 3: Methodology for Emission Reductions from Safe Drinking Water Supply, version 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	Estimated Amounts	Amounts Achieved	Units/Products
SDG:13 Climate Change	GHG emission reduction	VPA 2: 57,044 tCO2e VPA 3: 57,044 tCO2e	VPA 2- 45,855 VPA 3- 24,611	GS-VERs
SDG: 3 Good Health and Well Being	Reduce Illnesses and Death from Hazardous Chemicals and Pollution. Health quality improvement (qualitative assessment).	VPA 2: 80% reduction VPA 3:80% reduction	VPA 2- 99.1% VPA 3- 99.1%	Proportion of population reporting health improvement (qualitative assessment)
SDG: 5 Gender Equality	Average time saving associated with boiling water and fuel collection	VPA 2: 1.30 hours/HH/week VPA 3: 1.30 hours/HH/week	VPA 2- 2.46 VPA 3- 2.46	Hours/week
SDG: 6 Clean Water and Sanitation	Proportion of household served with safely managed water services	VPA 2: 16,275 VPA 3: 16,275	VPA 2- 15,293 VPA 3- 10,938	-
SDG:7 Affordable and Clean Energy	No. of WPS operational at any time in the VPA	VPA 2: 17,500 WPS VPA 3: 17,500 WPS	VPA 2- 16,445 VPA 3- 11.762	WPS
SDG:8 Decent Work and Economic Growth	Total no of jobs created. (During distribution and monitoring & Evaluation)	VPA 2: 45 jobs (26 male and 19 female) VPA 3: 16 jobs (7 male and 9 female)	VPA 2- 45 (Male -26 and female -19) VPA 3- 16 (Male -7 and female - 9)	Jobs

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 primary goal of the VPAs is to disseminate Safe Water Supply (SWS) devices such as Household Water Treatment (HWT) technologies to households & communities in the western region of Uganda, district Kyenjojo distributed in 8 Clusters named Kigaraale, Kihuura, Kisojo, Nyabuharwa, Buttiti, Nyantungo, Butunduzi and Kyakatwire. In the baseline scenario, these households consume untreated water or use traditional three stone fire stoves/ conventional mud stove, which burn non-renewable biomass (wood) for boiling water. To address this issue, the VPA facilitates the distribution of Purifaaya Regular ceramic water filters to these households. By doing so, the VPA not only ensures a safe supply of drinking water but also significantly reduces greenhouse gas (GHG) emissions.

SPOUTS International is the implementer of the VPA project, while AGS Carbon Advisory serves as the Coordinating and Managing (CME) entity. Throughout the project implementation, SPOUTS International receives support from TASC (The African Stove Company).

To improve the current situation of limited access to safe water in western regions of Uganda, the VPA distributes locally sourced ceramic water filters, specifically the "Purifaaya Regular water filter," which effectively filters, treats, and stores water. These filters are produced at the SPOUTS Water Factory in Nakawuka, Wakiso District, utilizing a combination of clay's permeability and sawdust's combustible properties to create micropores. These micropores ensure that the water provided to the beneficiaries is free of contaminants and safe for consumption.

1. Two different kinds of baseline scenarios were observed in western Uganda in the pre-project scenario: Dependence on non-renewable biomass (i.e., firewood) for boiling water using the traditional three-stone fire cookstove or conventional mud stove.

2. Drinking untreated contaminated water (suppressed demand scenario)

The VPAs of the GS PoA (GS11638) considered for this verification are:

1. GS11638 VPA-2 SPOUTS water purifier programme in Africa- WPS in Uganda by TASC - VPA 2
2. GS11638 GS11640 RVPA-1 SPOUTS water purifier programme in Africa- WPS in Uganda by TASC - VPA 3

The monitoring period covered under this verification is 30/03/2022 to 29/03/2023 (inclusive of both the dates). The total GHG emission reductions for the current monitoring period are 45,855 tCO_2e for VPA 2 and 24,611 tCO_2e for VPA 3. 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	GHG emission reduction	VPA 2- 45,855 VPA 3- 24,611	GS VERs
SDG: 3 Good Health and Well Being	Reduce Illnesses and Death from Hazardous Chemicals and Pollution. Health quality improvement (qualitative assessment).	VPA 2- 99.1% VPA 3- 99.1%	Proportion of population reporting health improvement (qualitative assessment)
SDG: 5 Gender Equality	Average time saving associated with boiling water and fuel collection	VPA 2- 2.46 VPA 3- 2.46	Hours/week

SDG: 6 Clean Water and Sanitation	Proportion of household served with safely managed water services	VPA 2- 15,293 VPA 3- 10,938	-
SDG:7 Affordable and Clean Energy	No. of WPS operational at any time in the VPA	VPA 2- 16,445 VPA 3- 11,762	WPS
SDG:8 Decent Work and Economic Growth	Total no of jobs created. (During distribution and monitoring & Evaluation)	VPA 2: 45 jobs (26 male and 19 female) VPA 3: 16 jobs (7 male and 9 female)	Jobs

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/01/ & VPA-DD/02/ for VPA 2 and VPA 3 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 – "Methodology for Emission Reductions from Safe Drinking Water Supply." (Version 1.0)/06/
(ii) The registered PoA-DD/01/ & registered VPA-DD/02/ and monitoring plan/02/
(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
(iv) GS4GG requirements
(v) The CDM Validation and Verification Standard (VVS) version 3.0/19/ and The CDM Project Standard (PS) version 3.0/19/
(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.
(vii) GS review of validation of PoA and VPA

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 audit (including sampling approach (refer Section D.4 of this report) to be applied)
c) Onsite audit (refer Section D.2 of this report) by verification team consistent of Team Leader and all Technical Experts, as a minimum
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 evidences)
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 the VPA 2 - "GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 2" and VPA 3 – "GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3" for the monitoring period 30/03/2022 to 29/03/2023 (both dates included), we confirm that the implementation of referenced registered PoA and its VPAs (VPA 2 and VPA 3) is complying with applicable CDM and GS4GG rules and regulations as stated in the Monitoring Report (final) Version 1.3, dated 23/10/2023/36/. The GHG emission reductions were calculated in line with the approved baseline and monitoring methodologies. Methodology for Emission Reductions from Safe Drinking Water Supply (Version 1.0)/06/ and the monitoring plan contained in the registered PoA-DD/01/ & VPA -DDs/02/.

Earthood Services Private Limited (hereafter referred as "Earthood") is able to certify that the emission reductions from the registered VPAs – VPA 2 "GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 2" (Distribution started on 30/03/2022) and VPA 3 "GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 3" (Distribution started on 19/07/2022) of registered PoA GS 11638 "SPOUTS Water Purifier Programme in Africa" during the current monitoring period 30/03/2022-29/03/2023 (inclusive of both days). Since the date of installation is the 'date of distribution of water filter' and not the 'date of actual application' one day from the total crediting days of each beneficiary is discarded which amounts to 45,855 tCO2e for VPA 2 and 24,611 tCO2e for VPA 3. Both the VPAs (VPA-2 and VPA-3) are small-scale as emission reductions for each VPA shall be less than 60k tCO2e/year which is the threshold limit for the VPAs . Both the VPAs have been fully implemented and the VPA implementer does not intend to distribute any further CEPs under the project activities. Therefore, this is being submitted for request for issuance, as per GS4GG/22/23/24/ and UNFCCC procedures/19/20/21/.

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 VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader (old), Verifier and T.A. Expert (TA 3.1)	IR	Jain	Arohi	Central office	Y	Y	Y	Y
2.	Team Leader (New)	IR	Phukan	Sukanya	Central office	Y	N	N	Y
3.	GS Approved Auditor	IR	Mahala	Deepika	Central office	Y	N	N	Y
4.	Local Expert	EI	Khaukha	Julius Sam	Central office	Y	Y	Y	N
5.	Trainee Verifier	IR	Gautam	Rahul dev	Central office	Y	N	N	Y

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	Garg	Shreya	Central Office
2.	Technical Expert (TA 3.1) to TR	IR	Garg	Shreya	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, distribution 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 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 ER sheet/5/ are free from material errors with a reasonable level of assurance.

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 assessment team using dedicated protocols (checklists). The assessment team cross checks the information provided in the documents (MR)/36/ and information from sources other than those used, if available, and also 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) /02/, the monitoring methodology including applicable tool(s) and, where applicable/1//2//06/, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures
3. A review of calculations and assumptions made in determining the GHG data and emission reductions/05/;
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. On-site inspection

Duration of on-site inspection

No.	Activity performed on-site	Site location	Date	Team member
1.	• Opening Meeting: Introduction, scope and objective of work, roles and responsibilities of audit team. • Parameter fixed Ex-ante and Baseline emissions, Project emissions and Leakage calculation • Project boundary and emission sources included in the project boundary • Choice and applicability of baseline methodology(ies) • Project Activity (Technology, Location and Implementation) • Monitoring plan (feasibility of monitoring arrangements described in PDD, QA/QC procedures, responsibility of implementation of monitoring plan, data recording & storage procedures) • Operational lifetime of the project activity, Start date of the project activity, Crediting period • Local Stakeholder Consultation process, comments received.	Western Uganda	08/05/2023, 15/05/2023-17/05/2023	Arohi Jain, Julius Sam Khaukha (LE)

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	First name	Last Name	Affiliation			
Interview of the Field Officers of CME						
1.	Neha	Garg	AGS carbon Advisory	08/05/2023	•Discussion on Programme Design and eligibility criteria •Discussion on programme funding and involvement of any ODA •Discussion on the PoA DD/VPA DD and ER sheet •Monitoring/Sampling plan •Sustainability aspects of the	Arohi Jain, Julius Sam Khaukha (LE)
2.	Parth	Tandon	AGS carbon Advisory			

					PoA SDG impacts	
3.	Ronald	Ampire	SPOUTS International	08/05/2023	•Monitoring plan •Baseline scenario •Technical description •Additionality •Project boundary, Ex-ante and Ex-post parameters	Arohi Jain, Julius Sam Khaukha (LE)
4.	Hester	Lanting	SPOUTS International			
5.	Nakakeeto	Stellah	SPOUTS International			
Project Monitoring Survey Responses						
1.	Katutu	Samali	End User	15/05/2023 to 17/05/2023	The range of questions asked is discussed under section D.3.1.	Arohi Jain, Julius Sam Khaukha (LE)
2.	Ahabyona	Violet	End User			
3.	Ayebale	Margaret	End User			
4.	Kabatuku	Viola	End User			
5.	Kansiime	Oliver	End User	15/05/2023 to 17/05/2023		
6	Amanyire	William	End User			
7	Ahebwa	Richard	End User			
8	Katusabe	Oliver	End User			
9	Ruhweza	Charles	End User			
10	Bisanga	William	End User			
11	Kabugabe	Roset	End User			
12	Kanyunyuzi	Maureen	End User			
13	Kabasomi	Beatrice	End User			
14	Aliganyira	Richard	End User			

15	Businge	Alozio	End User			
16	Ahebwa	Nelson	End User			
17	Baguma Moses	Rutaningoa	Local Stakeholder			
18	Akujuzibwe	James	Local Stakeholder			
19	Diana Kalya	Mugabi	Local Stakeholder			
20	Sajjabi K	Uthman	Local Stakeholder			

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

Following questions are asked by the end-users for the verification of samples:

No.	Questions asked by Team member as part of usage survey	Nature of responses
1.	Name of the end-user	Positively responded
2.	Location/ Address (Village name)	Positively responded
3.	Number of people in household	Positively responded
4.	What is the name and Product Model? Can you show us the product.	Positively responded
5.	What is the Installation Date?	Positively responded
6.	What is the Unique ID of the purifier?	Positively responded
7.	What are the main sources of water and its usage?	Positively responded
8.	Who is responsible for water collection?	Positively responded
9.	How much time does it takes for one trip and numbers of trip in a day?	Positively responded
10.	Number of cans and quantity of cans filled in one trip.	Positively responded
11.	What are the techniques used for water purification?	Positively responded
12.	After receiving the purifier, how much water (in percentage) is boiled?	Positively responded
13.	How is the time saved utilized?	Positively responded
14.	What type of fuel is used for cooking?	Positively responded
15.	Source of fuel wood (nearby area/forest/local market/etc.) and time taken to arrange it.	Positively responded

All the end-users reported that the product is working satisfactorily, and they feel that there has been an improvement in drinking water quality. All the end users also reported that they are aware of the grievance mechanism by AGS Carbon Advisory. While no adverse or negative responses were received regards the usage or convenience of use of WPS, some responded gave suggestions like having the project.

D.4. Sampling approach

CME's Sampling Approach

CME will follow sampling procedures given in Emission reductions from Safe Drinking Water Supply v.1.0/6/ for determining the sample size of each parameter. A confidence precision of 95/10 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 to the Emission reductions from Safe Drinking Water Supply v.1.0/6/.

CME has opted for cross VPA sampling due to homogenous distribution of population during the project survey for small scale VPAs implemented under registered GS PoA 11638 SPOUTS Water Purifier Programme in Africa (GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 2 and GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 3). Furthermore, the cross VPA sampling has been done in line with CDM Sampling Standard para 11, page 5 which states 95/10 confidence/precision is met for the VPAs/20/.
Considering both the VPAs are homogenous, implemented in the same project boundary and targeted beneficiaries with similar socio-economic strata. CME has applied single sampling plan for a group of VPAs across Uganda.

VVB's Sampling Approach

In order to meet the requirements of Standard for Sampling and surveys for CDM project activities and programmes of activities /20/, the verification team applied acceptance sampling in the verification (in accordance with para 28). The verification team selected random samples of CME's sampled records, checked the acceptability (or otherwise) of the data for each such record with CME's sample records, and then based on the number of records where there is an agreement, determined if the CME's sample records meet the requirements.

The verification team determined the sample size for acceptance sampling by evaluating the following, using its own professional judgment and guidance in the Standard 'Sampling and surveys for CDM project activities and programme of activities' /20/:

- The proportion of discrepancies between the CME's data and verification team's (field or onsite inspection results) data that can be considered acceptable. This is referred to as the AQL (Acceptable Quality Level): 0.5% was considered in this verification.
- The proportion of discrepancies between the CME's data and verification team's (field or onsite inspection results) data that would be considered unacceptable. This is the UQL (Unacceptable Quality Level): 20% was considered in this verification.
- The producer risk: 10% was considered.
- The consumer risk: 20% was considered.

Considering the above input values, a sample size of 16 was required 08 for each VPA as per Table (Sample size and acceptance number based on AQL, UQL, and producer and consumer risks) in the referred Standard /20/. Accordingly, the acceptance number (c) thus determined for the sample size is 0. A sample size of 16 meets the criteria. The samples to be surveyed by assessment team were randomly selected from the list of monitored samples using the random sample generator on Microsoft excel. The audit plan and list of samples thus obtained to be surveyed by the assessment team was communicated to CME via email.
Sample Size: (Per VPA)

PoA Ref no.	AQL	UQL	Producer Risk	Consumer Risk	Sample Size; Min	Acceptance No.
GS 11638	0.5%	20%	10%	20%	08	0

The current verification is for VPAs. In this monitoring period, following was observed;

Accordingly, the verification team has verified 16 samples collectively (Combined for VPA 2 and VPA 3) during the on-site audit and observed that the sampling survey results of the CME for all the CEPs checked were found to be consistent with VVB's survey results. The sampling method used is in line with Standard: Sampling and surveys for CDM project activities and programme of activities /20/ and Guideline: Sampling and surveys for CDM project activities and programme of activities /21/.

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	-	CAR#07	-
Remaining forward action requests from previous verification	-	-	FAR#01
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	-	CAR#02	-
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	-	CAR#03 CAR#04	-
• Implementation of sampling plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
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	-	CAR#01	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case VPA	-	CAR#05	-
• Remarks on difference from estimated value in registered VPA-DD	-	-	-
Assessment of reported sustainable development co-benefits	CL#02	CAR#06	-
Others (ER calculation Sheet)	-	CAR#03	-
Total	**02**	**07**	**01**

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/36/. The CME used the Gold Standards for Global Goals latest MR template version 1.1/04/ available on the GS webpage and all the details were filled as per the MR template filling guidelines/4/.
Findings	CAR 07 is raised and resolved.
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

There were three FARs raised from design review and previous verification:

FAR Raised	Response by PP	Response by GS VVB
FAR 1: SPOUTS needs to conduct physical stakeholder meeting and SFR after design review and before performance certification.	The VPA implementer (SPOUTS International) has conducted an additional grouped stakeholder consultation meeting on 11th May 2023 as per the GS4GG requirements.	VVB confirms that in line with GS4GG Requirements, CME has conducted physical stakeholder meeting and SFR which was verified by the VVB through interviews with the local stakeholder and the LSC evidences shared by the CME.
FAR 2: CME shall include the information/clarification on double counting and if, any such risk of double counting exists, has the project developer committed to retiring eligible units equal to the quantity of Gold Standard VERs.	The VPA implementer (SPOUTS International) has captured data on end-users drawing water from an improved source (such as borehole) during the combined project and usage survey . The enumerators had been trained to carry out an assessment of the village (while conducting the combined project and usage survey) in order to identify if there were any community based improved source (such as boreholes) located in the vicinity of the respondents	VVB has verified the combined project and usage survey, and it has been confirmed that end-users drawing water from an improved source (such as borehole) are identified in the survey. The responses on the survey sheet were verified by the VVB and it has been confirmed that no double counting of VERs are done in the VPAs.
FAR 3: CME shall put in place adequate measures to monitor and ensure that water sourced from safe water GS borehole projects is discounted from claiming carbon in VPA2 and VPA 3	In response to the finding raised by SustainCERT, the CME had captured information on the 'end-users drawing water from an improved source' during the combined project and usage survey. All the end-users responded to the question by clearly specifying that they were primarily dependent on unimproved sources (such as open wells , unprotected spring and surface water) for drawing	After analyzing the screenshots of the SurveyCTO software (the software that was used by the PD to collect information at the time of combined project and usage survey) the VVB confirms that the PD had monitored the data on 'end-users drawing water from an improved source (such as borehole)' during the combined project and usage survey. The PD has revised the MR and ex-post ER calculation

	water. The same has been recorded in the Survey CTO (app based survey) forms which were also provided to the VVB. The information, however, was not incorporated in the analysis presented in the ER sheet. The CME has therefore submitted screenshots of the SurveyCTO forms for SustainCERT's reviewal and the information captured in the survey CTO forms has now been included in the analysis done in the ER sheet. In addition to capturing information on drawing water from an improved source, the enumerators (who undertook the combined project and usage survey) were also trained to carry out a visual inspection of the villages in order to identify any community-based clean water supply system in the region. On visual inspection the enumerators who undertook the combined project and usage survey found a non-functional borehole located in the village of 'Nyakahama'. The households which were located in the vicinity of the non-functional borehole (a total of 6 in number) have been rendered as non-users of technology (by the CME) while estimating usage fraction in the revised ex-post ER calculation and discounted the Emission Reductions for the equivalent proportion of beneficiaries (the CME has added an additional parameter in column "AZ" of the revised ex-post ER calculation sheet to discount the emission reduction generated from such beneficiaries). The CME has further conducted a detailed analysis of the GS-registered borehole projects in western Uganda. Upon analysis, the CME found that though some of the GS-registered borehole projects are located in	sheet by including the following information: The information about beneficiaries drawing water from an improved source (such as a borehole) has been documented in the ex-post ER calculation sheet (under column 'AZ' of 'Project and Survey sheet') . In the response to the above question, none of the respondents (monitored during the combined project and usage survey) stated that they were drawing water from an improved source (such as a borehole) however, the PD confirmed that a visual inspection conducted by the enumerators (during combined project) revealed the presence of a non-functional borehole in the vicinity of some of the monitored households (6 beneficiaries). The VVB confirms that the PD has accounted for those 6 beneficiaries (the households were situated in the vicinity of a non-functional borehole) by rendering them as non-users of the technology. In section C of the revised MR : 'DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT' the PD has included an additional criteria for estimating the usage fraction: "whether the household is drawing water from improved sources (such as boreholes)?" The VVB further carried out an independent assessment of the 'registered borehole projects' in western Uganda. Based on the assessment, the VVB found that there are only 2 GS-registered borehole projects in western Uganda:

	the region of western Uganda but none of these projects supply clean drinking water to the population of 'Kyenjojo' (the district wherein VPA-2 and VPA-3 have been implemented). The analysis conducted therefore concludes that none of the beneficiaries targeted by the VPA implementer (SPOUTS International) draw water from a GS-registered borehole project (the CME has submitted the detailed GS- project analysis sheet to the VVB for reviewal).	1. GS1247 VPA220 Central and Western Uganda Safe Water Project (GS 7672) 2. GS1247 VPA219 Central and Western Uganda Safe Water Project (GS 7671) Though the above mentioned projects are located in the region of western Uganda, the VVB found that the districts targeted by these registered projects are Nakasongla, Masindi and Kiryandongo whereas the VPA implementer (SPOUTS International) has targeted 'Kyenjojo' district of Western Uganda for WPS distribution. Therefore, based on a detailed analysis the VVB confirms that besides establishing mechanisms to not claim credits from a GS-registered borehole project, the PD has also ensured that it does not claim credits for end-users who are drawing water even from a non-functional borehole.

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)
1. GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 2 (GS11640) 2. GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3 (GS 11861)	Yes	VPA 2- 2.7 VPA 3 - 2.1 And PoA -DD 2.3	NA, as this is the first monitoring period under GS.

E.4. Programme of activities

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

Means of verification

The purpose of this PoA is to disseminate Safe Water Supply (SWS) devices such as Household Water Treatment (HWT) devices in domestic households and communities in the countries of Africa- Uganda and Rwanda, which were earlier using wood and/or charcoal on rudimentary stoves for boiling water or were consuming untreated water. CME has implemented the VPA through coordination with the partner organizations (POs) and further with local/channel sellers/distributors. The overall responsibility of implementation and operation is with CME (AGS Carbon Advisory), which was evident from the interviews conducted with CME. This is consistent with PoA DD /01/. The current verification considers 02 VPAs (GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 2 and GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3) that was put together by CME.

The implementation of the VPA, as referenced above, is within the geographical boundary of the PoA-DD/01/, which constitutes the physical boundary as well.

The Purifaaya water filter model implemented under the VPA is a Purifaaya regular water filter. This purifier is 99.99% efficient against germs and bacteria, eco-friendly and modern replacement for traditional filters and delivers germs and bacteria free water without any requirement of fuel processing thus solving the health, environment and fuel collection effort required for operating traditional stoves for boiling. The total capacity of the water filter is 20 litres with ~10 litres of storage capacity.

Water purification system disseminated under the PoA include various models. The water purifiers remove harmful viruses, bacteria, parasites, pesticides and physical impurities, giving the water which is as safe as boiled water. The water purification systems disseminated in this PoA do not require electricity or continuous tap water and hence, there is no plumbing required.

Technical specification of the WPS model is verified with the details provided by the VPA implementer i.e., SPOUTS and found to be consistently reported in the monitoring report.

The verification team has confirmed that the number of WPS deployed under the VPAs are as follows:

VPA title and GS ID	Technology	Capacity
GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 2	Purifaaya regular water filter	Total capacity: 20 litres Stored Capacity: ~10 litres
GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in	Purifaaya regular water filter	Total capacity: 20 litres Stored Capacity: ~10 litres

Africa- WPS in Uganda by TASC-VPA 3		

The distributions under both VPAs are provided below:

VPA	Number of CEPs distributed	Number of active CEPs
VPA -2	17,491	16,445
VPA -3	12,510	11,762

The verification team was able to confirm that the quantity, specification and target group of the HWTs is consistent with the PoA DD /1/ and both VPA DDs/2/. Further, based on the physical observations from on-site visit conducted during current verification:

- The VPA(s) are implemented within the boundary of the PoA as described in the PoA-DD/1/.
- The CME is same as that mentioned in the PoA-DD/1/.
- 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 included VPA-DDs are in place.
- The project participants/VPA implementer has operated the VPAs as per the included VPA-DDs.

The verification team has conducted surveys via on-site visits with 16 households. It was observed that each HWT has unique identification number. The unique identification number on each WPS, personal information of WPS owners and distribution date of project technology was cross checked with the database provided with the CME. The operation of the WPSs was confirmed through surveys of owners/representatives (of SPOUTS). The households were asked various questions to confirm identity of the end user, operational status of the WPSs, presence and usage of baseline technologies, among others.

The emission reductions being claimed during this monitoring period are lesser than the estimated emission reductions in the respective VPA-DDs, as given in the table below for comparable estimated CERs in the VPA-DD for the corresponding period:

VPA no.	Estimated ERs (tCO_2)	Actual ERs (tCO_2)
VPA 02	57,044	45,855
VPA 03	57,044	24,611

The verification team considers the programme description as contained in the PoA-DD/1/ is complete and accurate. The PoA-DD/1/ complies with the applied methodologies, tools, and forms. The monitoring report was compared and verified against the description provided in the PoA-DD/1/ and found to be correct.

Grievance Mechanism AGS Carbon Advisory

The grievance mechanism of AGS Carbon Advisory involves recording the complaints from the beneficiaries by the field staff to the household on a regular basis in a logbook/35/ which is maintained at the registered office. During the current monitoring period, no grievances were received which was verified upon checking the logbook/35/. Additionally, all registered complaints from beneficiaries regarding the WPS were resolved within a

	span of 2 days which is reflected in the 'WPS parts replacement records' by reviewing the date of the call and the breakage follow-up-dates.
Findings	None
Conclusion	The verification team can confirm that all physical features (technology, project equipment, and monitoring equipment) of the VPAs were in place and that the CME operated the project activity in accordance with the registered VPA-DDs/2/ and VPA-Inclusion Report/3/ during the current monitoring period and based on the information verified through the on-site audit and interviews.

E.4.2. Implementation and operation of the management system

Means of verification	Based on the interview of CME representatives, representatives of VPA implementers and monitoring team, it is confirmed that the CME has organized an appropriate management and operational system for monitoring and reporting of WPS distribution. The CME co-ordinates with the VPA Implementor to establish a marketing and lending program for CEPs. POs staff, local distributors, technicians, and other service providers involved in marketing of CEPs to concerned households. Additionally, the VPAs followed a procedure to create the UID—"The Unique Identifier"—using a 3rd Party system to prevent multiple counting. The sales database of devices has been used to store the unique identity (numbering and programme logo) of each CEP as well as the client information (name, address). The VPA has followed a process to generate the UID- "The Unique Identifier has been generated using a 3rd Party system - TEC-IT Barcode Studio 16.2 and takes the below format: RTU2022 ######, where RT - Regular Technology (Product Type), U - Uganda (Country of Project), 2022 - Year of Distribution (Changes), ###### - Unique Product Number (Different for every Product). The generated numbers (Serial Codes) have been printed and attached to the product and are verifiable on each beneficiary's visit using a Barcode Scanner. On product distribution, the code has been matched with the Beneficiaries details which could be accessed once the UID was selected in the System." This file has been verified to also ensure that no household receives more than 1 purifier. The CME is responsible for QA/QC of the data, analysis and reporting into the monitoring report. For survey data, a monitoring team has been organized by the SPOUTS consisting of trained monitoring staff, who conducted the surveys/ field tests and WCFT. The staff was interviewed, and training records/14/ were checked to ensure that they were trained for conducting the surveys/ field tests and WCFT. The monitoring manager at the CME is responsible for QA/QC of the data, analysis and reporting into the monitoring report. VPA Implementer (SPOUTS) field staff conducts the surveys through three methods: hard-copy questionnaires, face to face interviews and telephone interviews. Any inconsistencies found (e.g., change in the address of a user) are updated on the database, and in the case, CEPs are found to be

	no longer in use, they will be clearly marked as such and excluded from emission reduction calculations. Original copies of warranty cards/07/, completed survey forms and carbon title transfer forms/10/ are retained by the respective POs/VPA implementers. The organizational structure and roles and responsibilities for monitoring were in line with the information provided in the VPA-DDs/2/, which was confirmed through interviewing PD representatives and the situation on the ground as observed during the onsite visit conducted during current monitoring period, and the structure was considered appropriate. The CEP users receive a carbon waiver form along with warranty card during the distribution of each WPS. The verification team cross-checked that that all the end- users have carbon waiver and warranty cards. The emission reduction rights are owned by SPOUTS International. It has been checked and verified from sample carbon waiver/10/. The verification team confirms that the process pertaining to the transfer of emission reduction rights to CME is valid and appropriate for the VPA 2 GS11640 and VPA 3 GS11861 requesting issuance.
Findings	No findings were raised.
Conclusion	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 /36/. 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 PoA-DD/1/. Below is given the list of the designated person and their key role in the project activity 1. AGS Carbon Programme In-Charge manages the Verification of Project Activities (VPAs). 2. SPOUTS Database Administrator maintains electronic databases. 3. SustainCERT and VVB ensure compliance with GS4GG requirements to prevent overestimations of emission reductions. 4. The Monitoring Team conducts user interviews, device tests, and data collection activities, including surveys and microbial contamination analysis.

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 documents

Means of verification

VPA 2 GS11640 and VPA 3 GS11861 described in this section target the promotion, distribution and sale of WPS (Water Purification System) i.e., Purifaaya water filter. Their specifications have been checked against the manufacturer specifications/12/. AGS Carbon Advisory is the Coordinating and Managing Entity (CME) for the implementation of VPA's. The CME coordinates and manages each Partner Organization (PO)/ VPA Implementer and assists in implementing each element of the monitoring plan, which was confirmed to be the case by interviewing the CME and PO staff.

Water Purification System:

VPA Ref. #	GS11640 (VPA 02)	GS 11861 (VPA 03)
Location	Western Uganda	Western Uganda
CEP Type	WPS	WPS
CEP Model	Purifaaya Regular water filter	Purifaaya Regular water filter
VPA Implementer / PO	SPOUTS International	SPOUTS International
Total Quantity Sold / Disseminated	17,491	12,510
Maximum Estimated Qty CEPs in CPA (for comparable year of distribution)	17,500	17,500
Estimated ERs (comparable period) (tCO2e)	57,044	57,044
Actual ERs from the CEP Type (tCO2e)	45,855	24,611

VPA 02 – GS11640:

	WPS were distributed in western Uganda, which is consistent with the description given in the included VPA-DD /2/. By the end of current monitoring period requesting issuance, total 17,491 WPS were disseminated under this VPA, which is within the estimated quantity of 17,500 WPS of the VPA-DD/2/ for comparable year of distribution. It's a small scale VPA and therefore, no thermal savings threshold is applicable. The distributed model of WPS is Purifaaya Regular distributed by PO and managed by CME. The end users are also provided with a carbon waiver form/10/ along with warranty card/7/ during the distribution of each HWT. VPA 03 – GS11861: WPS were distributed in western Uganda, which is consistent with the description given in the included VPA-DD/2/. By the end of current monitoring period requesting issuance, total 12,510 WPS were disseminated under this VPAs, which is within the estimated quantity of 17,500 WPS of the VPA-DD/2/ for comparable year of distribution. The distributed model of WPS is Purifaaya Regular distributed by PO and managed by CME. The end users are also provided with a carbon waiver form/10/ along with warranty card/7/ during the distribution of each HWT. SPOUTS has a mechanism of allocating a unique ID to each WPS so that there is no inter and/or intra-VPA double counting. This information was checked against sample end-user documentation CME database/8/ and was found to be appropriate. Further, the project was searched in different registries (GS,CDM,VERRA,GCC etc) and there were no similar projects observed. Also, the households selected for the distribution of WPS are not involved as beneficiaries under the national climate change policy or other GHG program. This was confirmed during the validation of the project activity. VVB has visited the baseline users during the validation and confirmed that the households were not part of any other projects and policies. This verification report covers the monitoring period from 30/03/2022 to 29/03/2023 (both dates included).
Findings	CL 01 is raised and resolved.
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

Not Applicable as this is the first monitoring period of the VPA under GS.

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-DDs/02/ was reviewed in relation to the monitoring requirements of the applied methodology, Emission reduction from safe drinking water supply-version 1.0 /09/, as well as the PoA DD /01/, bearing in mind the technology involved. In light of the review conducted, it was found that the monitoring plan in the VPA-DDs/02/ 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/01/ and applied methodology/06/. That is included in the VPA-DDs/02/.
Findings	CAR 02 is raised and resolved.
Conclusion	The monitoring plan is in line with the approved methodology Emission reduction from safe drinking water supply-version 1.0/06/, that is included in the registered PoA DD/1/ and VPA-DDs/02/. The monitoring plan is in accordance with the applied methodology /06/ that is included in the VPA-DDs/02/.

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

SDG13: Project Technology Description

Means of verification	Parameter ID: Project Technology Description The description of this parameter considered is mentioned as per VPA-DDs. The details were cross checked with the manufacturer's specification/12/. The WPS model distributed in VPA 02 & 03 and its technical specifications are mentioned in the table below: a. Manufacturer- SPOUTS International b. Technology type- Ceramic water filter c. Product name- Purifaaya, d. Model-Purifaaya Regular The Purifaaya models complies with US 201: 2008 Drinking water Standard class 1 and its performance level as per international scheme to evaluate household water treatment technologies by WHO is 1 star.

Model	Purifaaya Regular

	Total capacity | 20 litres container **Storage capacity** | ~10 litres **Number of people served** | Serves up to 6 people (at one go, when filled to the brim) **Filtration rate** | 4.5-5.5 litres **Effectiveness** | 99.99% efficient against germs and bacteria **Recommended Water Type** | Any kind of water **Power consumption** | No need of any power/electricity **Total quantity of water replaced by filter before replacement of any part** | 1,75,200 litres The lifespan of the water filter is 08 years. The models distributed under VPA 02 & 03 meet international criteria defined for microbiologically safe drinking water as seen from the test reports. The technical specifications were verified by on site records/38/ during which 8 households were interviewed and it was confirmed that the model can serve households with more than 6 people by filling the water filter multiple times in a day. The VVB confirms that the 'Purifaaya Regular' technology is appropriate even for households that have a household size of >6 members. During the verification audit visit conducted for the project, the VVB interviewed 8 households (some had a household size of >6 members) and based on the interviews the VVB found that all the households selected for the audit were fulfilling their water requirements on a daily basis by filling the water filter multiple times in a day.
Findings	No findings were raised.
Conclusion	The parameter is consistent with the registered VPA-DDs wherein it is recommended to establish baseline fuel usage for VPAs at the time of verification/02/. Hence the applied parameter is correct and justified.

SDG13: Regulatory Framework for safe water supply

Means of verification	The data has been confirmed from the respective VPA-DDs/02/ and crosschecked with The Uganda standard, US EAS 12:2014, potable water – Specification specifies the Microbiological requirements, Chemical and physical limits for quality of drinking water supplies, provided by CME. The VPAs meet host country's potable water specifications set by The Uganda standard US EAS 12:2014; the project is found in conformance and not conflicting with national regulatory frameworks and policies. Following gives the maximum Microbiological requirements for drinking water: | | Allowable compliance limits and contribution of samples (%) |

	<table><tr><th></th><th>Minimum 95%</th><th>Maximum of 4% of samples</th><th>Maximum of 1% of samples</th></tr><tr><td>Coliform count per 100 ml</td><td>0</td><td>10</td><td>100</td></tr><tr><td>E. Coli (faecal coliform) count per 100 ml</td><td>0</td><td>0</td><td>1</td></tr><tr><td colspan="4">Note: For each individual sample coliform should be estimated in terms of the "Most Probable Number" in 100 ml of drinking water, which is often designated as MPN index or Coli index. Occurrence of E. coli (faecal coli) in consecutive samples, in less than 100 ml of drinking water is an indication of faecal pollution and hence a dangerous situation needing urgent, rectification.</td></tr></table>
Findings	No findings raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/. It was verified by reviewing the Mq,y results performed for all 35-sample collected for microbial quality test. Hence, the water quality complies with The Uganda standard, US EAS 12:2014, and the applied value is correct and justified.

SDG13: Water sources in the project boundary

Means of verification	The data provided is verified from the respective VPA-DDs and cross checked with the applied methodology/06/. As per the baseline survey the water sources in project boundary are: • Surface water • Unprotected dug wells • Piped water The identification of the water source category is used for calculation of parameter C_b.
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/. The applied value is correct and justified.

SDG13: Purifier technologies used in the project boundary

Means of verification	The value of the parameter was confirmed and checked against the baseline survey and studies carried by various institutions at the time of validation. As per the baseline survey 95% use of three stone fire stoves whereas 5% used mud stoves for boiling water.(both lacking improved air supply mechanism and flue gas ventilation system)
Findings	No findings were raised.

Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/. The applied value is correct and justified.

SDG13: Expected technical life of project technology

Means of verification	The value applied for the parameter is verified from the respective VPA-DDs/02/ and cross checked with Manufacturer's specification of the project technology/12/. The operation lifetime of the device is 8 years for the VPAs. Same values were reflected in the latest monitoring report. The values have been cross checked with the manufacturers' specifications/12/.
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/ and the grievance logbook /35/ for the current monitoring period. The applied value is correct and justified. The VVB has reviewed the consolidated list of complaints/43/ registered during the current monitoring period and it was found to be acceptable.

SDG13: Percentage of fuel f used in target population; x_f

Means of verification	The value applied for the parameter is verified from the VPA-DDs/02/ and cross checked against the baseline survey and studies carried by various institutions at the time of validation. The value of this parameter considered is wood - 100%. The raw data from baseline study and baseline survey results was crossed-checked and was found to be consistently reported in the monitoring report.
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/. The applied value is correct and justified.

SDG13: $EF_{b,f,CO2}$, CO2 emission factor arising from use of fuels in baseline Scenario; tCO_2/TJ

Means of verification	The value applied for the parameter was found to be the default IPCC value sourced from 2006 IPCC Guidelines for National Greenhouse Gas Inventories 2.1, Volume 2: Energy at the time of validation. The values are confirmed from the VPA-DD/02/. This value is used for the determination of baseline emissions. The value of this parameter considered as mentioned in the VPA-DDs is 112 tCO2/TJ for firewood. The value was also cross checked with applied methodology Emission Reductions from Safe Drinking Water Supply" v1/06/.
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DD/2/. The applied value is correct and justified.

SDG13: $EF_{b,f,non-CO2}$, Non-CO2 emission factor from use of fuels, in case the baseline fuel is biomass or charcoal; tCO_{2e}/TJ

Means of verification	The value applied for the parameter was found to be consistent with the respective VPA-DDs/02/ and cross checked with IPCC defaults for woody biomass, the following defaults derived from the IPCC shall be applied: AR5 GWP - Wood: 9.46 tCO2e/TJ - Charcoal: 44.83 tCO2e/TJ (includes production emissions of CH4 and N2O) The value of this parameter considered as mentioned in the VPA-DDs is 9.46 tCO_2e/TJ for wood. The value was also cross checked with applied methodology Emission Reductions from Safe Drinking Water Supply" v1/06/.
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /05/are consistent with the registered VPA-DDs/2/. The applied value is correct and justified.

SDG13: ηwb, Weighted average efficiency of the baseline water boiling devices; %

Means of verification	The values were verified through VPA DDs and are correctly reported in the monitoring report. The value of this parameter considered as mentioned in the VPA-DDs is 10% for three stone fire cookstove and conventional mud stoves. The value was also cross checked with applied methodology "Emission Reductions from Safe Drinking Water Supply", v1/06/ where both three-stone fire stove and conventional mud stoves qualify to have an efficiency value of 10% as they lack improved combustion air supply mechanism or flue gas ventilation system. And this was also observed during the onsite visit/38/.

Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/are consistent with the registered VPA-DDs/2/ and on-site records /38/. The applied value is correct and justified.

SDG13: C_b, Proportion of project end-users who in the baseline were already using safe water, either from an improved water source, or from a water treatment method other than boiling; %

Means of verification	The value mentioned in the parameter is found to be consistent with the values mentioned in respective VPA-DDs/02/. The value applied is 7% and this value of the parameter is based on baseline survey carried out by PP and verified at the time of validation. The above provided value is used for the determination of baseline emissions.
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DDs/2/. The applied value is correct and justified.

SDG13: SDWS 13; q_i, Capacity of the household or institutional water treatment technology; Litres per hour

Means of verification	The values were verified from the respective VPA-DDs/02/ and cross-checked with the manufacturer specification of the technology/12/. This value is used for the determination of baseline emissions. The value of this parameter considered as mentioned in the VPA-DDs are as follows: Purifaaya Regular- 5 (average of 4.5-5.5)
Findings	No findings were raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DDs/2/. The applied value is correct and justified.

SDG13: $f_{NRBf,y}$, Fractional non-renewability status of woody biomass fuel during year y, in case the baseline fuel is biomass

Means of verification	The methodology 'Emission reductions from safe drinking water supply, version 1.0' provides three options for monitoring the parameter 'fNRB,f,y' : a) Determined at ex-ante and fixed for a given crediting period b) Updated biennially c) Updated at each monitoring and verification The CME had selected the first option for monitoring the parameter and estimated the value of fNRB using CDM Tool 30. The values mentioned in the parameter are consistent with the values mentioned in the VPA-DDs/02/ and cross-checked with CDM Methodological tool 30: Calculation

	of the fraction of non-renewable biomass, Version 03.0/37/ and is found to be correctly reported in the monitoring report. The values considered in this parameter is 90% Apart from this various other documents: Other reference documents: 2019 Refinement to IPCC 2006 Global Forest Resources Assessment 2020 Uganda Global Forest Resources Assessment 2015 Forest Product Conversion Factors 2020 FAOSTAT on Forest Production and Trade
Findings	No findings raised.
Conclusion	The value mentioned in the Monitoring Report /36/ and Emission Reduction Spreadsheet /5/ are consistent with the registered VPA-DDs/2/. The applied value is correct and justified.

E.5.4.2. Data and parameters monitored

SDG13: Proportion of project end-users that boil safe (treated, or from safe supply) water after installation of project technology in year y; Percentage; $X_{Cleanboil,y}$

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 PoA-DD/1/ and VPA-DDs/2/
	Monitoring equipment	Not Applicable
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	The value applied for this parameter is 0% and was verified against the onsite interviews/38/, during which households were questioned if they continued practice of boiling water after installation of water purification system. All surveyed households confirmed that the water dispensed from project device is perceived safe for drinking and is not boiled or treated since installation of the project device. It was also cross-checked with the project survey results /39/ and it was found to be consistent.
	If applicable, has the reported data been cross-checked with other available data?	The values are cross-checked with sample survey records/39/ provided by the CME where the end-users confirmed

		that they did not boil water from the WPS as they considered it to be safe.
	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/2/ (as per measurement methods and procedures to be applied) and applied methodology /06/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/2/.	

SDG13: Fraction; $M_{q,y}$

Relevant SDG Indicator	SDG13: Climate Action	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	The parameter is measured and recorded 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 PoA-DD/1/ and VPA-DDs/2/
	Monitoring equipment	Not Applicable
	Calibration frequency /interval:	Annual sampling
	How were the values in the monitoring report verified?	The value of this parameter is derived based on water quality tests complying with WHO Guideline values for verification of microbial quality. CME has conducted microbial testing for water samples from 35 different households/15/ and the reports confirmed that the water quality meets the WHO standards and hence it is found to be acceptable. For the monitoring period, the value of the

<table>
<tr><td></td><td></td><td>parameter is 1.

The values obtained for this parameter are:<table><tr><th>VPA</th><th>State</th><th>M_q Value</th></tr><tr><td>VPA 02</td><td>Western Uganda</td><td>1</td></tr><tr><td>VPA 03</td><td>Western Uganda</td><td>1</td></tr></table>This has been checked from in ER sheet/5/ and the approach is found to be conservative, thus acceptable. In case a national standard is not available, the water quality shall comply with WHO Guideline values for verification of microbial quality i.e., all water directly intended for drinking must not have detectable E.Coli in any 100 ml sample i.e., less than 1 Colony Forming Unit (CFU) of E.Coli /100 ml.</td></tr>
<tr><td></td><td>If applicable, has the reported data been cross-checked with other available data?</td><td>The data has been cross-checked with the onsite visit carried out by the VVB/38/ where the end-users were asked whether they found the water from the CEP safe or not and was there any difference observed. The end users responded positively and reported that water quality was believed to be safe and visibly cleaner from the previous source.</td></tr>
<tr><td></td><td>Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?</td><td>Yes. The QA/QC procedure are in place, internal checks have been done by the VPA implementer and established through on-site interviews.</td></tr>
<tr><td></td><td>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?</td><td>Not Applicable</td></tr>
<tr><td>Findings</td><td colspan="2">None.</td></tr>
<tr><td>Conclusion</td><td colspan="2">The parameter has been monitored appropriately, in accordance with the registered monitoring plan/2/ (as per measurement methods and procedures to be applied) and applied methodology/06/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.</td></tr>
</table>

SDG13: Volume of drinking water per person per day for premises type p; Litres/person/day; QPW_p

<table>
<tr><td>Relevant SDG Indicator</td><td colspan="2">SDG13: Climate Action</td></tr>
<tr><td>Means of verification</td><td>Criteria/Requirements</td><td>Assessment</td></tr>
<tr><td></td><td>Measuring /Reading /Recording frequency</td><td>This parameter is measured every two years.</td></tr>
</table>

	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-DDs/2/.
	Monitoring equipment	WCFT (Water Consumption Field Tests) have been conducted to measure the project supplied clean water consumption values. All values for WCFT are capped at 5.5 l/person/day. The WCFT was conducted with the end-users' representative of the project scenario target population and currently using the project technology. The WCFT was designed in a way to ensure that monitoring is representative of typical technology use practices that: - WCFT was transparent and can be easily replicated - it was evidently conservative - sample were randomly selected so as to not introduce a material bias and, - the impact of daily and seasonal variations on the expected average water consumption was accounted during WCFT. The WCFT was conducted for over a period of 4 days, not including weekends and averaged value (l/person/day) was determined after outliers were excluded. The sample size for WCFT was conducted for 35 different households (minimum sample size for WCFT is 30 households).
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The test was conducted in which randomly selected 35 samples for conducting WCFT and this was conducted for 4 days, and averaged values (l/person/day) was determined after excluding the outliners. The VPA implementer (SPOUTS International) also captured the source of water (Unimproved/Improved) during the time of WCFT-. All the beneficiaries selected for the WCFT (35 samples) were found using unimproved sources on all the 3 WCFT days. These values are verified by reviewing the documents provided regarding this test. The value of the parameter as per VPAs are:

		<table><tr><th>VPA</th><th>Location</th><th>Parameter value</th></tr><tr><td>VPA 02</td><td>Western Uganda</td><td>4.52</td></tr><tr><td>VPA 03</td><td>Western Uganda</td><td>4.52</td></tr></table> In order to assess PD's claim of no seasonal variation, the VVB carried out an independent assessment by referring to various literature/42/. Some of the literature referred by the VVB to verify PD's claims are as follows: The literature clearly indicates that places near the equator (such as Uganda) experience little/ no seasonal variations. The VVB also gained a detailed insight of the seasonal variations in Uganda by interacting with the VVB's local expert in the country who confirmed the same. The VVB therefore conclusively establishes that seasonal variation does not having any impact on WCFT in a country (crossed by equator) like Uganda .
	If applicable, has the reported data been cross-checked with other available data?	The test results were checked by the verification team and were found acceptable. The results are reproducible in the corresponding ER sheet of final Monitoring Report/40/.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. The QA/QC procedure are in place, internal checks have been done by the VPA implementer and established using information received during remote surveys and interviews and conducted test. QA/QC procedures were also assessed during the MP and were found to be 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	CAR 04 is raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/2/ (as per measurement methods and procedures to be applied) and applied methodology /9/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG13: Filter pot replacement of the Purifaaya regular water filter, Replacement of filter pot; QPW_p

Relevant SDG Indicator	SDG13: Climate Action	
Means of verification	Criteria/Requirements	Assessment
	Measuring /Reading /Recording frequency	This parameter is measured every four years.
	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-DDs/2/.
	Monitoring equipment	The project implementer (SPOUTS) has maintained a database regarding the date of distribution of water filters to different households of western Uganda. SPOUTS has committed to replace the water filter every 4 years in order to ensure that the end-users are supplied with clean drinking water beyond 4 years without disruption.
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The SPOUTS team has already changed 10 of the recipients' filter pots during the current monitoring period. The SPOUTS crew replaced these filter pots that were accidentally broken and were reported under Repair and Maintenance. In order to guarantee that the beneficiaries continue to receive a steady supply of clean drinking water from the water filters, the SPOUTS crew replaced the filter pot. The assessment team has verified the same through the replacement records.
	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?	Yes. The QA/QC procedure are in place, internal checks have been done by the VPA implementer and established using information received during on-site surveys and interviews and conducted test. QA/QC procedures were also assessed during the MP and were found to be in place. Additionally, it was recorded that the complaints were addressed in 2 days which was confirmed from the replacement's records /17/. The non-operational days have been discounted while estimating the average technology days (for the 10 beneficiaries who reported instances of breakages in the current MP).

		For the non-operational days during downtime for 10 devices, the ERs have been adjusted as confirmed from the ER Sheet and the pots were replaced within 2 days as confirmed by the PP.
	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	None.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered 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 approved frequency in the monitoring plan.	

SDG13: Accumulated number of premises type p with at least one individual project technology in year y; Number; $N_{p,y}$

Relevant SDG Indicator	SDG 13: Climate Change	
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-DDs/2/.
	Monitoring equipment	Not Applicable
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	The verified value for this parameter are: VPA 02 | Western Uganda | 17,491 VPA 03 | Western Uganda | 12,510 The records of number of WPS distributed in monitoring database, ex-post ER sheets were used for verification.
	If applicable, has the reported data been cross-checked with other available data?	The values were cross-checked with the distribution database/13/ provided by the CME.

	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/2/ (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.	

SDG 13: Usage rate of the project technology by premises type p during year y, %, $U_{p,y}$

Relevant SDG Indicator	SDG 13: Climate Change	
Means of verification	Criteria/Requirements	VVB Assessment
	Measuring /Reading /Recording frequency	Annually
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency in line to the PoA-DD/1/ and VPA-DDs/2/.
	How were the values in the monitoring report verified?	The data was verified during onsite visit/38/ conducted by the VVB where the end-users were asked about the operationality/functionality and usage of the WPS distributed. The end-users responded positively that the product was functional and was used daily. The end users were also questioned about the number of times they filled water in the WPS, to which the end users replied that there was not much difference in their consumption of water. Hence, there is no seasonal variation observed/42/ in the VPAs for water consumption. The value of the parameter as per VPAs are:

VPA	Location	Parameter value

		VPA 02 | Western Uganda | 94.0% VPA 03 | Western Uganda | 94.0% The value was cross-checked with the survey carried out by CME/39/ and was found to be consistent. The decrease in the usage rate was observed as residents with non-operational borehole were considered to be using improved source of water which is found to be acceptable by the VVB.
	If applicable, has the reported data been cross-checked with other available data?	The value was cross-checked with the survey carried out by CME/39/ and was found to be consistent.
	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.
Findings	CAR 04 is raised and resolved.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/, and registered VPA-DDs/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.	

SDG 13: Average days the project technology is present for end-users in the premises p in year y – $DP_{p,y}$

Relevant SDG Indicator	SDG 13: Climate Change	
Means of verification	Criteria/Requirements	VVB Assessment
	Measuring /Reading /Recording frequency	Annually
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency in line to the PoA-DD/1/ and VPA-DDs/2/.
	How were the values in the monitoring report verified?	The data was verified during onsite visit/38/ conducted by the VVB where the end-users were asked about the operationality/functionality and usage of the CEP distributed. The end-users responded positively that the product was functional and was used daily. They were also asked about the no. of days in a year they are using the filters. The non-operational days have been

<table>
<tr><td></td><td></td><td>discounted while estimating the average technology days (for the 10 beneficiaries who reported instances of breakages in the current MP). The value of the parameter as per VPAs are:
<table><tr><th>VPA</th><th>Location</th><th>Parameter value</th></tr><tr><td>VPA 02</td><td>Western Uganda</td><td>310</td></tr><tr><td>VPA 03</td><td>Western Uganda</td><td>233</td></tr></table>The intallation date is same as the date of distribution. Since it was no in operation for the first day the total no of crediting days are reduced by 1 for both the VPAs.

The date of installation (as defined in the revised MR) is the ‘date of distribution of water filter’ and not the ‘date of actual application’. After reviewing the ex-post ER calculation sheet, the VVB further confirms that the PD has reduced the no. of total crediting days by 1 for each beneficiary. The number of technology days (parameter DPp,y) have been revised from ‘311’ to ‘310’ days.

The value was cross-checked with the survey carried out by CME/39/ and was found to be consistent.</td></tr>
<tr><td></td><td>If applicable, has the reported data been cross-checked with other available data?</td><td>The value was cross-checked with the survey carried out by CME/39/ and was found to be consistent.</td></tr>
<tr><td></td><td>Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?</td><td>The QA/QC processes were deemed to be appropriate and trustworthy.</td></tr>
<tr><td>Findings</td><td colspan="2">CAR 04 is raised and resolved.</td></tr>
<tr><td>Conclusion</td><td colspan="2">Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/, and registered VPA-DDs/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.</td></tr>
</table>

SDG 13: Usage time of the project technology by premises type p in year y, Hours per day, $t_{p,y}$

Relevant SDG Indicator	SDG 13: Climate Change

Means of verification	Criteria/Requirements	VVB Assessment
	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 to the PoA-DD/1/ and VPA-DDs/2/.
	How were the values in the monitoring report verified?	The value of the parameter is determined via project survey using Option 1 : Observational sample-based survey of project household practices. The value is observed to be 22.87 hours per day for both the VPAs
	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.
Findings	CAR 04 is raised and resolved.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD/1/ and VPA-DDs/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.	

SDG 13: Average number of individual project technologies in each project premises type p in year y, Number, $DN_{p,y}$

Relevant SDG Indicator	SDG 13: Climate Change	
Means of verification	Criteria/Requirements	VVB Assessment
	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 to the PoA-DD/1/ and VPA-DDs/2/.
	How were the values in the monitoring report verified?	Based on the onsite visit/38/ conducted by the VVB where the end users were asked about the total number of the product received and distribution database/13/ provided by the CME, this value was verified and accepted. The verified value was 1 i.e., each household received only 1 WPS during this verification period.

	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.
Findings	CAR 04 is raised and resolved.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD/1/ and VPA-DDs/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.	

SDG13: Number of individuals per premises type p in the project boundary in year y; H$N_{p,y}$

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-DDs/2/.
	Monitoring equipment	Not Applicable
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	The verified values in this monitoring period are:

VPA	Location	Parameter value
VPA 02	Western Uganda	5.65
VPA 03	Western Uganda	5.65

	If applicable, has the reported data been cross-checked with other available data?	These values were cross-checked with the project survey values shared by the PP in line with the applied methodology/06/. PP has applied conservative values for the parameter and the lowest value amongst the project survey and census was considered for the emission reduction calculation.
	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/2/ (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: Water Hygiene Education Campaigns

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-DDs/2/
	Monitoring equipment	Not Applicable
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	It has been cross checked through the report on annual hygiene campaign results. The WHO/UNICEF Joint Monitoring Programme Core questions for drinking water and hygiene have been used to evaluate the effects of the hygiene campaigns by identifying the percentage of homes where safe water and hygiene campaign are determined to satisfy

		"safely managed" or "basic" requirements. A survey including all of the JMP basic questions for hygiene and drinking water must be conducted in person, over the phone, or by messaging (such as SMS or apps). In the western region of Uganda, SPOUTS undertook a number of programmes during the current monitoring period to raise awareness of the value of washing hands with soap.
	If applicable, has the reported data been cross-checked with other available data?	NA
	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. As a result of the hygiene initiatives, it is anticipated that the proportion of households whose safe water and hygiene practises are found to satisfy "safely managed" or "basic" requirements will grow over time.
	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/2/ (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.	

SDG 3: Good Health and Well-being

Relevant SDG Indicator	**SDG 3.9 – Decrease in number of family members visiting the medical facilities for pollution-related inconveniences like itchy eyes and breathing problems and water borne diseases**	
Means of verification	**Criteria/Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	This parameter is measured 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	Not Applicable
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	The data was verified by crosschecking the survey details which was recorded by random selection of beneficiaries, and it was also reflected by the decreasing no. of family members visiting the medical facilities for pollution-related inconveniences like itchy eyes and breathing problems and water borne diseases. The values applied are 99.1% for both VPAs.
	If applicable, has the reported data been cross-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?	Not Applicable
Findings	CAR 03 is raised and resolved.	
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.	

SDG 6: Clean Water and Sanitation

Relevant SDG Indicator	**SDG 6.1 – Number of households served with safely managed water services**	
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/. The verified values are: 15,293 for VPA 2 and 10,938 for VPA 3.
	Monitoring equipment	Not Applicable
	Calibration frequency /interval:	Not Applicable

	How were the values in the monitoring report verified?	
	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 Appendix 1 to the CDM Project Standard?	Not Applicable
Findings	None	
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 /06/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG 7: Affordable and Clean Energy

Relevant SDG Indicator	**SDG7: No. of operational WPS**	
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 PoA-DD/1/ and VPA-DDs /2/.
	How were the values in the monitoring report verified?	The post monitoring records/8/18/ were checked to identify as part of the assessment as well as during the interviews conducted with the selected beneficiaries during site visit/45/ the intended beneficiaries who are having access to affordable, reliable and modern energy services. The residents who were drawing water from non-functional borehole are considered as non eligible residents which was recorded in the Usage survey of the project. Since, the combined project and usage survey determines the usage rate of 94.0% for both the VPAs, this value was sourced after analysing the responses from the combined project usage survey-"Project and

		Usage" tab in the Ex-post ER calculation sheet. The value of the parameter considered to be VPA 2- 16,445 and VPA 3- 11,762, which was found to be acceptable.
	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.
Findings	CAR 03 is raised and resolved.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/, and registered 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.	

SDG 8: Decent Work and Economic Growth

Relevant SDG Indicator	**SDG 8.5- Total number of jobs created**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	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 to the PoA-DD/1/ and VPA-DD /2/.
	How were the values in the monitoring report verified?	These are cross-checked through employment contract /26/ for all the employees/31/. Based on the documentary evidence provided by CME, this value was verified and accepted. The verified value is thus: 45 (Male -26 and female -19) for VPA 02 and 16 (Male -7 and female – 9) for VPA 03 contract employees. The employment contracts also confirmed the birth dates of all employees, thus ensuring that the project does not involve child labour.
	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.

Findings	CAR 03 is raised and resolved.
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.

SDG 5: Gender Equality

Relevant SDG Indicator	**SDG 5.4- Average time saving associated with cooking and fuel collection**	
Means of verification	**Criteria/Requirements**	**VVB Assessment**
	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 to the PoA-DD/1/ and VPA-DD /2/.
	How were the values in the monitoring report verified?	This value is the average time saved associated with cooking and fuel collection and was cross checked from the monitoring survey. Based on the documentary evidence provided by CME, this value was verified and accepted. The verified value is thus: 2.46 hours/week for VPA 02 and 2.46 hours/week for VPA 03.
	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.
Findings	CAR 03 is raised and resolved.	
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.	

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 Emission Reduction from safe drinking water supply v1.0/06/, and the CDM EB 110, Annex 1, Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities/20/. The CME has opted for cross-VPA sampling due to the homogenous nature of the programme. According to the pertinent sampling standards in the "Guidelines for sampling and surveys for CDM project activities and programme of activities," a statistically valid sample was utilised to calculate the parameter values. For the sampled parameters, a minimum 95%

<table>
<tr><td></td><td>confidence interval and 10% error margin have been attained. A minimum sample size of 30 has been used for proportion parameter values, or the size of the entire group if it is less. The simple random sampling approach has been applied to select the samples for survey.

The CME has conducted following kinds of surveys:

• Combined project and usage survey- 117 samples
• Water Consumption Field Test- 35 samples
• $M_{q,y}$- 35 samples

For monitoring surveys, the sample size of combined usage and project survey conducted was 117. As per the methodology, the minimum sample size for project survey is 100 while the minimum sample size for usage survey is 30 but as a combined project and usage survey has been done therefore a sample size of 105 was required for both. The samples covered for WCFT are 35 since the minimum sample required are 30. The number of samples covered for $M_{q,y}$ are 35 since the minimum samples to be covered are 30. The samples were randomly selected from the project database ensuring samples from both the VPAs.

Monitoring survey (by CME) duration:

The monitoring survey (field survey / tests) was carried out by CME representatives between the following duration for the current monitoring period.

<table>
<tr><th>Type of Survey</th><th>Survey dates</th><th>Monitoring survey applicable for this MP?</th></tr>
<tr><td>Combined Project and Usage Survey</td><td>04/04/2023 to 06/04/2023</td><td>Yes</td></tr>
<tr><td>WCFT Survey</td><td>02/05/2023 to 05/05/2023</td><td>Yes</td></tr>
<tr><td>Fraction of samples that pass the microbial quality standard requirement ($M_{q,y}$)</td><td>-</td><td>Yes</td></tr>
</table>
Thus, it is confirmed that monitoring survey is applicable for the entire monitoring period.</td></tr>
<tr><td>Findings</td><td>None</td></tr>
<tr><td>Conclusion</td><td>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/.</td></tr>
</table>

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

<table>
<tr><td>Means of verification</td><td><u>SDG-13: Climate Action</u>
The equations used were found consistent with the PoA DD/1/, VPA DDs/2/ and the applied methodology Emission reduction from safe drinking water supply v1.0/6/

For calculation of emission reduction, the following equation has been used:
$ERy = BEy - PEy - LEy$
Where:
ERy = Emission reductions in year y (Tco_2e/yr)</td></tr>
</table>

BEy = Baseline emissions in year y (Tco_2e/yr)
PEy = Project emissions in year y (Tco_2e/yr)
LEy = Leakage emissions in year y (Tco_2e/yr)

The baseline emission is calculated as:
$BE_y = EF_b \times (1 - C_b - X_{cleanboil,y}) \times Q_y \times M_{q,y}$

Where:

BE_y	=	Baseline emissions from the use of fuel to obtain safe water in the baseline (Tco_2e)
C_b	=	Proportion of project end-users who in the baseline were already using a safe water supply that did not require boiling (%)
$X_{cleanboil,y}$	=	Proportion of project end-users that boil safe water in the project year y (%)
Q_y	=	Quantity of safe drinking water provided by the project in year y (L)
$M_{q,y}$	=	Modifier for the water quality in year y

The baseline emission factor is calculated as:

$$EFb = SEw,b,y * \Sigma(xf * (EFb,f,CO2 * fNRB,f,y + EFb,f,nonCO2)) f \div 10^9$$

Where,

EF_b	=	Emission factor for the use of fuel to obtain safe water in the baseline (Tco2e/L)
$SE_{w,b,y}$	=	Specific energy required to boil water (Kj/L), to be calculated as per the paragraph below
xf	=	Proportion of fuel f used in the baseline (fraction determined based on an energy basis)
$EF_{b,f,CO2}$	=	CO2 emission factor from use of fuel f (Tco2/TJ)
$EF_{b,f,nonCO2}$	=	Non-CO2 emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (Tco2e/TJ). This parameter is omitted when f is a fossil fuel.
$f_{NRB,f,y}$	=	Fractional non-renewability status of woody biomass fuel during year y (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when f is a fossil fuel.
F	=	Index for baseline fuel types

Also,
$SE_{w,b,y}$ = 360.83/ η_{wb}

Where,

360.83 = Default amount of energy required to obtain 1 L of water after 5 minutes of boiling from a first principles approach Kj/l

ηwb = Efficiency of the stoves for baseline water boiling (%). Weighted average of baseline stove types.

Again,

	$Q_y = \sum N_{p,y} \times U_{p,y} \times QPW_{hh,p,y} \times DP_{p,y}$ Where: $N_{p,y}$ = Number of premises type p with at least one project technology in year y $U_{p,y}$ = Usage rate of the project technology by premises type p during year y (%) $QPW_{hh,p,y}$ = Volume of drinking water per premises p per day in year y (L) $DP_{p,y}$ = Days the project technology is present for end-users in the premises p in year y The calculation provided as a sample for the two VPAs in MR/36/ has been reviewed and is found consistent with actual calculations applied in ER calculation sheet/5/. It is noted that the sample calculation provided in MR is only one example, which in no case reflects total baseline emissions from the technology i.e., from WPS distribution. The calculations presented in the Monitoring Report /36/ and the corresponding ER sheet /05/ were found appropriate and complying with provisions prescribed in the registered monitoring plan/2/ of the respective VPA-DDs/2/, PoA-DD/1/ and applied methodology/6/.
Findings	None
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/05/ of final Monitoring Report. 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/36/ were checked and found to be consistent with the formulae and methods described in the registered monitoring plan of VPA-DDs/2/, registered PoA-DD/1/ and the applied methodology/06/. d) All assumptions used in the emission calculations were found appropriate and therefore justified. e) Appropriate emission factors, IPCC default factors/33/ 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	The PoA-DD/1/, VPA-DDs/2/ and applied monitoring methodology/06/ does not prescribe any project emissions to be considered. The onsite visit conducted, and project design also did not reveal any potential source to be considered in this regard.
Findings	CAR 01 is raised and resolved.
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/05/ of final Monitoring Report /36/. 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 PoA-DD/1/, VPA-DDs/2/ and applied monitoring methodology/06/ does not prescribe any leakage emissions to be considered. The onsite visit conducted, and project design also did not reveal any potential source to be considered in this regard.
Findings	None
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 /36/. 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.6. Calculation of net benefits or direct calculation for each SDG Impact

Means of verification

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
SDG 13	Emission Reductions	VPA-2= 45,855 VPA 3= 24,611	-	VPA 2= 45,855 VPA 3= 24,611
SDG 3	Reduce Illnesses and Deaths from Hazardous Chemicals and Pollution. Health Quality Improvement (Qualitative assessment)	-	VPA 2=99.1% VPA 3=99.1%	VPA 2= 99.1% VPA 3= 99.1%
SDG 5	Average time saving associated with boiling water and fuel collection	-	VPA 2: 2.46 VPA 3: 2.46	VPA 2: 2.46 VPA 3: 2.46
SDG 6	Proportion of population served with safely managed water services	-	VPA 2: 15,293 VPA 3: 10,938	VPA 2: 15,293 VPA 3: 10,938
SDG 7	No of WPS operational at any time in the VPA	-	VPA 2: 16,445 VPA 3: 11,762	VPA 2: 16,445 VPA 3: 11,762
SDG 8	Total number of jobs created	-	VPA 2: 45 jobs (26 male and 19 female) VPA 3: 16 jobs (7 male and 9 female)	VPA 2: 45 jobs (26 male and 19 female) VPA 3: 16 jobs (7 male and 9 female)

The calculation methods applied for all the SDG impacts were checked with

	PoA-DD/1/ and VPA-DDs/2/. The verification team confirms that the stated figures were checked and found acceptable.
Findings	CL 02 and CAR 06 are raised and resolved.
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 D.5.4 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.7. 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 Target	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	VPA 2: 57,044 tCO_2e VPA 3: 57,044 tCO_2e	VPA 2: 45,855 tCO_2e VPA 3: 24,611 tCO_2e
3	Good Health and well being	VPA 2: 80% reduction VPA 3: 80% reduction	VPA 2: 99.1% reduction VPA 3: 99.1% reduction
5	Gender Equality	VPA 2: 1.30 hours/HH/week VPA 3: 1.30 hours/HH/week	VPA 2: 2.46 hours/HH/week VPA 3: 2.46 hours/HH/week
6	Clean Water and Sanitation	VPA 2: 16,275 VPA 3: 16,275	VPA 2: 15,293 VPA 3: 10,938
7	Affordable and clean energy	VPA 2: 17,500 WPS VPA 3: 17,500 WPS	VPA 2: 16,445 WPS VPA 3: 11,762 WPS
8	Decent Work and Economic Growth	VPA 2: 45 jobs (26 male and 19 female) VPA 3: 16 jobs (7 male and 9 female)	VPA 2: 45 jobs (26 male and 19 female) VPA 3: 16 jobs (7 male and 9 female)

As the result of the VPA-DDs, 57,044 tCO_2e through each VPA were expected to be reduced within a time frame of 30/03/2022 – 29/03/2023 (both days inclusive). However, based on monitoring data, actual emission reductions so far are only 45,855 tCO_2e for VPA 2 and 24,611 Tco2e for VPA 3 during this monitoring period i.e., 80.38% for VPA 2 and 43.14% for VPA 3 of the estimated emissions reductions was achieved during this monitoring period. The actual SDG targets against the anticipated values in PoA-DD and VPA-DD is lower for all the SDGs except SDG 3 and SDG 5 as tabulated above.

Findings	CAR 05 is raised and resolved.
Conclusion	The actual emission reductions achieved in the current monitoring period for the VPA is lower than the emission reductions as well as for other SDG

	targets except SDG 3 and SDG 5 stated in the VPA-DDs /2/. Therefore, it has been accepted by the verification team.

E.7.1. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

Means of verification	The Monitoring Report /36/ and corresponding ER calculations sheet /5/, show that the actual emission reductions achieved for project stove during this monitoring period are less than the estimate provided in VPA-DD /2/. However, the achieved targets for SDG 3 and SDG 5 are higher than those estimated in the VPA-DDs. The CME justifies that the effects of utilising a water filter are often felt over time. With time, the beneficiaries were able to clearly see and describe the advantages of the water filter. The SPOUTS awareness efforts were also crucial in changing the way of life in the western Ugandan region of the VPA, which raised the achieved SDG 3 during the monitoring period in comparison to the value stated in the VPA-DD.
Findings	None
Conclusion	No justification was sought from the PD because the achievement of emission reductions were lower than what had been estimated.

E.8. Safeguarding Principles

Principles	How Project will achieve Requirements through design, management or risk mitigation	Assessment/Observation
Principle 1. Human Rights		
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights. 2. The Project shall not discriminate with regards to participation and inclusion	The project will be implemented in collaboration with local partners and SPOUTS will respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Right. The project will not discriminate with regards to participation and inclusion. The end-users have formally agreed that they are voluntarily: participating in the water filter distribution activity, agreeing to transfer the credits generated due to the water filters, providing personal details such as GPS location, photographs and contact details. Therefore, the beneficiaries are willingly receiving products (ceramic water filters from the project implementer) after the information about the benefits of	As verified from the experts opinion/40/, the CME is following the rules of the host country i.e., Uganda for the implementation of the VPAs and will not lead to violations of human rights or discrimination of any kind. The end- users are accepting the water filtration distribution devices voluntarily after acknowledging its benefits and are simultaneously transferring the carbon rights to SPOUTS International.

	the water filter has been disseminated by the project implementer – SPOUTS. SPOUTS shall follow a systematic approach of identifying beneficiaries based on the baseline survey carried out in the region and it shall be ensured that there is no discrimination in the process of water filter distribution to the beneficiaries Further, as the safeguarding principle is relevant in the context of the project, the CME has sought expert opinion for the same.	
Principle 2: Gender Equality		
1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of non discrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks (where required) 4. Summary of opinions and recommendations of an Expert Stakeholder(s)	The project activity doesn't endorse any form of discrimination based on gender. Water Purification Systems (WPS) will be distributed to all willing customers within the project boundary. The project will have a positive impact on women considering that they will spend less time on boiling water for treatment or walking for miles to collect water and fuel. The projects shall apply the principles of non-discrimination and would pay equally to people employed. The Government of Uganda prioritizes gender equality as a cross cutting enabler for socio-economic transformation as mentioned in Uganda Gender Policy (2007) Therefore, the water filter distribution project has a positive impact on the principle of gender equality and it ensures that no form of gender-based discrimination is reinforced. Further, as safeguarding principle 2 is relevant in the context of the project the CME has sought expert opinion for the same.	As verified and evident from the experts opinion/40/ there is no discrimination of any type caused by the project activities. SPOUTS International along with TASC is distributing the water filtration devices Purifaaya Regular to all the people who wish to use them within the project boundary. The devices will provide access to safe drinking water to the people and hence reducing their water boiling time. Apart from this, all the people who have been employed due to implementation of the project activities are paid equally and there is no discrimination on any ground. This ensures that the project activities have positive impact on principle of gender equality.

Principle 5: Corruption		
1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	SPOUTS will ensure that the project doesn't involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects. Further, the CME has sought expert opinion for principle 5.	As verified from the expert opinion/40/ by the VVB, both the VPAs do not involve any activities which lead to corruption or corrupt projects.
Principle 6.1: Labour Rights		
1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual workers shall be documented and implemented and include: a) Working hours (must not exceed 48 hours per week on a regular basis), AND b) Duties and tasks, AND c) Remuneration (must include provision for payment of overtime), AND	1. The project is implemented by SPOUTS an Africa based organization in collaboration with other project partners. The project employment will be in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions. 2. The workers employed by SPOUTS for the project are able to establish and join labour organizations. 3. The working agreements with the individual workers will be documented and implemented and the minimum requirements stated will be respected as applicable. 4. No child labour allowed in the project and the minimum age for employed or wages staff is above 18 years. All the workers will be provided with appropriate equipment, training documentation and reporting of accidents and incidents, and emergency preparedness and response measures. All the labour hiring will be done on a contractual basis and remuneration will be provided in	The VPas follow the labour laws of the host country Uganda as verified by the VVB from the experts opinion/40/ and ILO standards.

d) Modalities on health insurance, AND e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion) 5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures	compliance with the host country's (Uganda) guidelines on labour wages. The water filter distribution project will ensure that there is no forced labour and all employment is in compliance with ILO (International Labour Organization) guidelines. The water filter distribution project will ensure that there is no forced labour and all employment is in compliance with ILO (International Labour Organization) guidelines. Further the safeguarding principle 6.1 is relevant in the context of the project hence the CME has sought expert opinion for the same.	

E.9. Stakeholder Inputs and Legal Disputes

E.9.1. Stakeholder Consultation

Means of verification	The CME has conducted the physical local stakeholder consultation meeting on 11/05/2023 as checked from LSC Report /18/. Sample stakeholders who attended the meeting were also interviewed during the onsite visit and their feedback on the projects was positive. Furthermore, they have also confirmed that they have attended the LSC meeting. The summary of the comments received during the meeting is complete and CME has taken appropriate steps to address each query/concern and gathered feedback.

	CME had invited all participants who attended the LSC meeting for further comments and also to those who have been invited for the LSC meeting and also included more stakeholders involved in policy -making and representatives from NGOs working in the region of project. CME used different invitation methods like invitation in person, advertisement in online local newspapers, Email and SMS. The same was confirmed by the verification team during the onsite interviews. All the comments received during the SFR period have been provided in the LSC report /18/. Verification team based on review of LSC report /18/ confirms that the feedback from the SFR has been appropriately addressed by the CME. Furthermore, as per the interviews, verification team confirms that there is an effective continuous consultation/grievance mechanism process so any stakeholders can access, approach and provide feedback to CME if they want. The grievance register /35/ has been placed in SPOUTS office in Kampala, Uganda as confirmed by the verification team during the onsite visit. This is deemed appropriate and acceptable to the verification team.
Findings	FAR 01 from the preliminary review is resolved.
Conclusion	Since there were no negative comments reported in the Grievance AGS Carbon Advisory mechanism for the current Period. This section is 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 the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of 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 needs 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 Projects 11640 "GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 2" and 11861 "GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 3" in the host country Uganda for the monitoring period 30/03/2022 to 29/03/2023 (both dates inclusive), as reported in the Monitoring Report, Version 1.3 dated 23/10/2023. The 'SPOUTS International' 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 "Methodology for Emission Reductions from Safe Drinking Water Supply (Version 1.0)/06/, the monitoring plan contained in the VPA-DD and Monitoring Report Version 1.3 dated 23/10/2023/36/.

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 1.3 dated 23/10/2023. ESPL, based on outcome of verification activities, certifies in writing that, during the monitoring period 30/03/2022 to 29/03/2023 (inclusive of both the dates), the registered VPAs – "GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC-VPA 2" achieved the verified amount of 45,855 tCO_2e and "GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3" achieved the verified amount of 24,611 tCO_2e reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the VPAs.
The verified amount of emission reductions is stated below as per implemented VPAs and as per commitment period:

Verified GS voluntary emission reductions for the monitoring period:

Monitoring period	**Amount (Tco2e)**
From 30/03/2022 till 31/12/2022 (VPA 2) From 19/07/2022 till 31/12/2022 (VPA 3)	VPA 2- 34,800 tCO_2e VPA 3- 18,677 tCO_2e
From 01/01/2023 till 29/03/2023 (both VPAs)	VPA 2- 11,055 tCO_2e VPA 3- 5,934 tCO_2e
Total	**VPA 2- 45,855 tCO2e** **VPA 3- 24,611 tCO2e**

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
CH4	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
VPA	Voluntary project Activity
CPA	Component Project Activity
CP	Crediting period
DNA	Designated National Authority
EB	Executive Board
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
ID	Identity
IR	Internal Resource
IPCC	Intergovernmental Panel on Climate Change
Kg	kilogram
MR	Monitoring Report
NCV	Net Calorific Value
PDD	Project Design Document
PO	Partner Organization
PoA	Programme of Activities
PD	Project Developer
QA/QC	Quality Assurance/ Quality Control
RMP	Registered monitoring plan
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
HWT	Household Water Treatment
WPS	Water Purification System
WCFT	Wate consumption field test

Appendix 2: Competence of team members and technical reviewers

Competence Statement			
Name	Arohi Jain		
Education	M. Sc. Environmental Sciences B.Sc. Biology		
Experience	3 years 5 months		
Field	Environmental Sciences		
Approved Roles			
Team Leader	Yes (VM)		
Validator	Yes (VM)		
Verifier	Yes (VM)		
Local expert	Yes (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	Yes (VM TA 3.1)		
Reviewed by	Shifali Guleria, Quality Manager	**Date**	30/05/2023
Approved by	Deepika Mahala, Technical Manager	**Date**	30/05/2023

Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M. Sc. (Environment Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G, AMS-II.C		
Local expert	YES (India, Bangladesh)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Reviewed by	Shifali Guleria (QM)	**Date**	28/04/2022
Approved by	Kaviraj Singh (MD)	**Date**	28/04/2022

Competence Statement

Name	Julius Sam Khaukha		
Country	Uganda		
Education	Bachelors in Social Administration		
Experience	7 Years +		
Field	Education and Social Work		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (Uganda)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	NO		
Reviewed by	Abhishek Mahawar	**Date**	01/03/2018
Approved by	Ashok Kumar Gautam	**Date**	01/03/2018

Competence Statement			
Name	Rahul Dev Gautam		
Education	B.Tech in Civil Engineering M.Tech in Environmental Engineering		
Experience	-		
Field	Civil Engineering		
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**	12/07/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	12/07/2023

Competence Statement	
Name	Shreya Garg
Country	India
Education	M.Sc. (Climate Science & Policy), TERI University
Experience	9 Years +

Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., AMS.III.BL, ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1)		
Reviewed by	Shifali Guleria	**Date**	21/12/2022
Approved by	Deepika Mahala	**Date**	21/12/2022

Competence Statement			
Name	Sukanya Phukan		
Education	M.Sc (Environmental Science and Technology) B.Sc (Zoology)		
Experience	1+ year		
Field	Environment Science		
Approved Roles			
Team Leader	YES (VM only)		
Validator	YES (VM only)		
Verifier	YES (VM only)		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (VM TA 1.2, 3.1)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	23/06/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	23/06/2023

Appendix 3: Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	AGS CARBON ADVISORY	PoA-DD	Version 2.3 dated 24/01/2023	CME
2.	AGS CARBON ADVISORY	VPA 2 VPA-DD VPA 3 VPA-DD	Version 2.7 dated 05/04/2023 Version 2.1 dated 05/06/2023	CME
3.	ESPL	Validation Report for inclusion of VPA 2 Validation Report for inclusion of VPA 3	Version 4.0 dated 05/04/2023. VPA 3 (Fast track inclusion)	Others
4.	GS4GG	Monitoring report template Guide	Version 1.1, published on 14/10/2020	GS4GG
5.	AGS CARBON ADVISORY	SPOUTS_ER calculation sheet_18.07	Pertaining to latest MR	CME
6.	The Gold Standard Foundation	GS Methodology for emission reductions from safe drinking water supply	Version 1.0	Others
7.	AGS CARBON ADVISORY	Warranty Card_WPS	-	Others
8.	GS4GG	https://registry.goldstandard.org/projects/details/3685	-	Others
9.	The Gold Standard Foundation	https://registry.goldstandard.org/projects/details/3639 https://registry.goldstandard.org/projects/details/3746	-	Others
10.	AGS CARBON ADVISORY	Carbon waiver document	-	CME
11.	AGS CARBON ADVISORY	Fnrb Uganda	Various	CME
12.	AGS CARBON ADVISORY	Manufacturer's Specification	Various	CME
13.	AGS CARBON ADVISORY	Start date proof_VPA2 (Water filter end-user agreement) Start date proof_VPA3 (Water filter end-user agreement)	-	CME
14.	AGS CARBON ADVISORY	Training Records	-	CME
15.	AGS CARBON ADVISORY	Microbial Quality Standard Test	-	CME
16.	AGS CARBON ADVISORY	Water Consumption Field Test – May 2023	December 2020	CME
17.	AGS CARBON ADVISORY	WPS parts replacement record	Dated 19/11/2017	CME
18.	AGS CARBON ADVISORY	SPOUTS_LSC Report revised_latest Attendance Sheet-LSC Email Invitation LSC	-	CME

		Feedback Forms – LSC Filters Feedback Forms – LSC		
19.	UNFCCC	CDM PS and CDM VVS for PoA	Version 3.0	Others
20.	UNFCCC	Standard: sampling and surveys for CDM project activities and programme of activities	Version 9.0	Others
21.	UNFCCC	Guidelines: sampling and surveys for CDM project activities and programme of activities	Version 4.0	Others
22.	GS4GG	Principle and requirements	Version 1.2	Others
23.	GS4GG	PoA Requirements	Version 2.0	Others
24.	GS4GG	CSA Requirements	Version 1.2	Others
25.	AGS CARBON ADVISORY	Handwashing Campaign – Kyenjojo District April 2023 Handwashing 63 ampaign Trainer_s Facilitation Report on Hand Hygiene Activities April 2023	Version 2.1	Others
26.	AGS CARBON ADVISORY	Employment Contract Payslip		
27.	AGS CARBON ADVISORY	Employment record_VPA 2 Employment record_VPA3,4 and 5	-	CME
28.	IPCC	IPCC Guidelines for National Greenhouse Gas Inventories 2.1 (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf)	-	Others
29.	GS4GG	Form: GS-MR-FORM	Version 1.1	Others
30.	SPOUTS	SPOUTS_Kyenjojo DLG_Campaign Letter Work plan for activities of Hand hygiene campaign	-	CME
31.	AGS CARBON ADVISORY	Employment Trainers Contract Flyers_Awareness	-	CME
32.	AGS CARBON ADVISORY	Annual Hygiene Campaign_2022 Photos and videos, Annual Hygiene Record of Annual Hygiene_2022		
33.	IPCC	GWP: IPCC AR4 https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf	-	Others
34.	IPCC	GWP: IPCC AR5, https://www.ipcc.ch/assessment-report/ar5/	-	Others
35.	AGS CARBON ADVISORY	Grievance LogBook	-	Others
36.	AGS CARBON ADVISORY	Monitoring Report (final)	Version 1.3, dated 23/10/2023	CME
37.	UNFCCC	Tool 30: Calculation of the fraction of non-renewable biomass	Version 3.0	CME

38.	ESPL	On-Site visit records	08/05/2023, 15/07/23-17/05/2023	VVB
39.	AGS CARBON ADVISORY	Sample survey records	-	CME
40.	AGS CARBON ADVISORY	Experts Opinion on Safeguarding Principles	-	CME
41.	AGS CARBON ADVISORY	Employment Declaration SPOUTS	-	CME
42.	NATIONAL GEOGRAPHIC	UGANDA TEMPERATURE https://education.nationalgeographic.org/resource/season/ http://www.atmo.arizona.edu/students/courselinks/fall16/atmo336/lectures/sec4/seasons.html	-	Other
43.	AGS CARBON ADVISORY	Consolidated list of complaint or grievances – Excel sheet titled "Replacement tracker"	-	CME

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

Table 1. Remaining FAR from validation and/or previous verification

FAR ID		**Section no.**	E.9.1	**Date :** 31/07/2023
Description of FAR				
SPOUTS needs to conduct physical stakeholder meeting and SFR after design review and before performance certification.				
Project proponent response				**Date :** 31/07/2023
Keeping in mind, the FAR raised by GS4GG, the VPA implementer (SPOUTS International) had conducted an additional grouped stakeholder consultation meeting (and stakeholder feedback round) on 11th May,2023. The VPA implementer had invited all the categories of stakeholders (specified by GS4GG) during the stakeholder consultation meeting. LSC report for the same has been submitted to the VVB and SustainCERT (at the time of VPA 3 fast track inclusion).				
Documentation provided by project proponent				
LSC Report and supporting evidence				
VVB assessment				**Date:** 31/07/2023
The VVB has assessed the LSC report submitted by the CME and also interviewed the some of the local stakeholders who attended the physical local stakeholder meeting conducted by SPOUTS International on 11/06/2023 in Kyenjojo, Uganda during the on-site visit for the project. The details mentioned in the report are found to be correct. The VVB has also observed that the feedback from the SFR has been appropriately addressed by the CME. Furthermore, as per the interviews, verification team confirms that there is an effective continuous consultation/grievance mechanism process so any stakeholders can access, approach and provide feedback to CME if they want. Hence, FAR 01 is closed.				

TABLE 2. CL FROM THIS VERIFICATION

CL ID	01	**Section no.**	E.5.1	**Date :** 15/06/2023
Description of CL				
Upon reviewing the Distribution database sheet, the VVB has observed that there is a discrepancy regarding the crediting period start and end dates for VPA 2 and VPA 3 in Table 2. According to the sheet, the crediting start date is 30-03-2022 for VPA 2 and 19-03-2022 for VPA 3, with the monitoring period ending on 29-03-2023 for VPA 2 and 31-03-2023 for VPA 3. However, the provided information states that both VPA 2 and VPA 3 have the same monitoring period, starting on 30/03/2022 and ending on 29/03/2023. Kindly provide clarification on the accurate crediting and monitoring periods for VPA 2 and VPA 3.				
Project participant response				**Date :** 20/06/2023
The crediting period dates for VPA-2 and VPA-3 are as follows: 1) Crediting period-1 date for VPA-2 is 30th March,2022 to 29th March,2027 2) Crediting period-1 date for VPA-3 is 19th July,2022 to 18th July,2027 However, the CME is conducting cross-VPA sampling between VPA-2 and VPA-3 therefore the monitoring period for both VPA 2 and VPA 3 is same and lies between 30/03/2022 to 29/03/2023.				
Documentation provided by project participant				
Revised MR Revised ex-post ER calculation sheet				
VVB assessment				**Date:** 24/07/2023
The dates for the crediting period and monitoring period for each VPA is revised in the MR and ER sheet which have been assessed by the VVB and found to be appropriate. Hence, CL 01 is closed.				

CL ID	02	Section no.	E.6	Date : 15/06/2023
Description of CL				
In accordance with the applicable GS requirements, PD is requested to share the SDG Impact Tool for the VPA 2 and VPA 3.				
Project participant response				**Date :** 20/06/2023
The SDG Impact Tool for VPA 2 and VPA-3 has been submitted to the VVB.				
Documentation provided by project participant				
SDG Impact Tool for GS11640 and GS 11861				
VVB assessment				**Date:** 24/07/2023
SDG impact tool for both GS11640 and GS 11861 are provided by the PD which have been verified by the VVB and found to be OK. Hence, CL 02 is closed.				

TABLE 3. CAR FROM THIS VERIFICATION

CAR ID	01	Section no.	E.5.6.2	Date : 15/06/2023
Description of CAR				
While reviewing the ER summary sheet, it has been observed that there is a discrepancy in the values provided for VPA 2 and VPA 3 under Table 1. According to the summary sheet, the ER values for VPA 2 are documented as 47,676 (Cell C7) and for VPA 3 as 25,616 (Cell D7). However, in the monitoring report, under Table 1 – 13 Climate Action – Amount achieved, the GHG emission reduction values are stated as VPA 2- 51,428 and VPA 3- 27,602. PD is requested to kindly review and update the values for the GHG emission reductions achieved for VPA 2 and VPA 3 in the current monitoring report.				
Project participant response				**Date :** 20/06/2023
The value of Ers provided in the revised MR has been updated by the CME. The revised MR and the ER summary sheet are now consistent with respect to the value of ER (for both VPA 2 and VPA 3) for the current monitoring period.				
Documentation provided by project participant				
Revised MR Revised ex-post ER calculation sheet				
VVB assessment				**Date:** 24/07/2023
The VVB has assessed the updated Ers in MR and found them to be consistent with ER sheet. Hence, CAR 01 is closed.				

CAR ID	02	Section no.	E.5.3	Date : 15/06/2023
Description of CL				
In accordance with the template guidelines outlined in Section A.3 – Reference of Applied Methodology, project developer is kindly requested to provide precise references, including titles, versions, and, if applicable, UNFCCC reference numbers, for the following: a) Selected baseline and monitoring methodologies. b) Any methodologies or methodological tools referenced by the selected methodologies. c) Any selected standardized baselines, if applicable. Correction is requested.				
Project participant response				**Date :** 21/06/2023
The CME has updated section A.3 of the revised MR. The reference of CDM Tool 30 'Calculation of the fraction of non-renewable biomass, version 3.0' used for the calculation of Fnrb value (for Uganda) has been added in section A.3 of the revised MR.				
Documentation provided by project participant				
Revised MR				
VVB assessment				**Date:** 24/07/2023

PD has updated the details provided in Section A.3 for the reference of applied methodology and they stand in line with the template guideline. Hence, CAR 02 is closed.

CAR ID	03	**Section no.**	E.5.4.2	**Date :** 15/06/2023
Description of CL				
PD is requested to kindly incorporate the calculations for the achieved SDG targets of VPA 2 and VPA 3 in the ER sheet.				
Project participant response				**Date :** 21/06/2023
The calculations for the achieved SDG targets (SDG 3, SDG 5, SDG 7, SDG 8 and SDG 13) have been added in the revised ex-post ER calculation sheet. The CME has also reflected the same values in the revised MR.				
Documentation provided by project participant				
Revised ex-post ER calculation sheet Revised MR				
VVB assessment				**Date:** 24/07/2023
PD has incorporated the relevant calculations for the achieved SDGs (SDG 3, SDG 5, SDG 7, SDG 8 and SDG 13) in the ER calculation sheet and MR which has been further checked by the VVB and found to be appropriate. Hence, CAR 03 is closed.				

CAR ID	04	**Section no.**	E.5.4.2	**Date :** 15/06/2023
Description of CL				
The VVB has observed the following inconsistencies under section D.2 of MR: 1. In Section D.2 - SDG 13 - Monitoring parameter 'QPWP', based on the information provided in the ER sheet under the Emission Reduction Estimation section, the volume of drinking water per person per day for premises type p (L) is reported as 4.52 for both VPA 2 (Cell E15) and VPA 3 (Cell F15). 2. For monitoring parameter $U_{p,y}$ the values applied are 99.4% but according to the Emission Reduction (ER) sheet, under the Emission Reduction Estimation section, the cumulative usage rate for technologies in project scenario p in year y is reported as 97.4% for both VPA 2 (Cell E10) and VPA 3 (Cell F10). 3. For DPp,y the values applied are VPA 2- 310 and for VPA 3- 233 but according to the ER sheet, in the Emission Reduction Estimation section, the numbers the project technology is present for end-users in premises p in year y is reported as 311 for VPA 2 (Cell E13) and 234 for VPA 3 (Cell F13). 4. For $t_{p,y}$, the values provided in Emission Reduction (ER) sheet, in the Emission Reduction Estimation section, the usage time of the project technology by premises type p in year y is reported as 22.87 for VPA 2 (Cell E18) and 22.87 for VPA 3 (Cell F18). 5. For $DN_{p,y,}$: As per ER sheet - Emission reduction estimation - Average number of individual project technologies in each project premises type p in year y is reported as 1 for VPA 2 (Cell E11) and 1 for VPA 3 (Cell F11). PD is requested to clarify about these inconsistencies.				
Project participant response				**Date :** 21/06/2023

1. Since cross VPA sampling has been done for VPA-2 and VPA-3, the value of the parameter QPW_p (Volume of drinking water per person per day for premises type p) is Same for both VPAs and has been updated to 4.54 litres/person/day. The updated value has been made consistent in the revised MR and the revised ex-post ER calculation sheet by the CME.
2. The value of the parameter $U_{p,y}$ (Usage rate of the project technology by premises type p during year y) has been updated to 97.4% (for both VPA-2 and VPA-3). The updated value has been made consistent in the revised MR and the revised ex-post ER calculation sheet by the CME.
3. The value of the parameter $DP_{p,y}$ (Days the project technology is present for end-users in the premises p in year y) has been updated to 311 days (for VPA-2) and 234 days (for VPA-3). The updated values have been made consistent in the revised MR and the revised ex-post ER calculation sheet by the CME.
4. The value of the parameter $t_{p,y}$ (Usage time of the project technology by premises type p in year y) has been updated to 22.87 hours/day (for both VPA-2 and VPA-3).The updated value has been made consistent in the revised MR and the revised ex-post ER calculation sheet by the CME.
5. The value of the parameter $DN_{p,y}$ (Average number of individual project technologies in each project premises type p in year y) has been updated to 1 (for both VPA-2 and VPA-3).The updated values have been made consistent in the revised MR and the revised ex-post ER calculation sheet by the CME.

Documentation provided by project participant

Revised MR
Revised ex-post ER calculation sheet

VVB assessment | **Date:** 24/07/2023

1. Cross VPA sampling was conducted for both VPA 2 and VPA 3 which is found to be true and the values for parameter QPW_p (Volume of drinking water per person per day for premises type p) has been updated to 4.54 litres/person/day which is found to be consistent and appropriate.
2. The value of parameter $U_{p,y}$ (Usage rate of the project technology by premises type p during year y) has been updated to 97.4% (for both VPA-2 and VPA-3). PD has addressed the inconsistency appropriately.
3. PD addressed the inconsistency for $DP_{p,y}$ and it has been updated to 311 days which is found to be appropriate and in line with the ER sheet.
4. The value of the parameter $t_{p,y}$ has been updated to 22.87 hours/day (for both VPA-2 and VPA-3) by the PD which is found to consistent and inline with the ER Sheet.
5. PD has appropriately addressed the inconsistency and the value of the parameter $DN_{p,y}$ has been updated to 1 (for both VPA-2 and VPA-3) which is inline with ER sheet.

Hence, CAR 04 is closed.

CAR ID	05	**Section no.**	E.7	**Date :** 15/06/2023

Description of CL

In section D.3. – 'Comparison of monitored parameters with last monitoring period', it has been identified that the values recorded in the current monitoring period differ from those indicated in the Emission Reduction (ER) sheet. The project owner is kindly requested to review CAR 04 and address the necessary adjustments required in this section.

Project participant response | **Date :** 22/06/2023

The values of all the parameters listed in the section D.3 ($X_{Clean,boil}$, $M_{q,y}$, QPW_p, $N_{p,y}$, $U_{p,y}$, $DP_{p,y}$, $HN_{p,y,}$, SDG 3.9, SDG 5.4, SDG 6.1, SDG 8.5) have been updated. The updated values have been made consistent in the revised MR and the revised ex-post ER calculation sheet by the CME.

Documentation provided by project participant

Revised MR
Revised ex-post ER calculation sheet

VVB assessment | **Date:** 24/07/2023

The VVB has assessed the updated MR and found it to be consistent with ER sheet.
Hence, CAR 05 is closed.

CAR ID	06	Section no.	E.6	Date : 15/06/2023
Description of CL				
In accordance with the template guidelines under Section E.2, PD is requested to provide the necessary references and supporting evidence for the parameter 'Number of active CEPs'. This is to ensure the substantiation of the stated information and facilitate a streamlined review process by the assurance providers.				
Project participant response				**Date :** 22/06/2023
Keeping in mind the guidelines mentioned in the 'Template guide for Monitoring Report, version 1.1' the CME has updated section E.2 and provided the necessary references and supporting evidence for the parameter 'Number of active CEPs' (SDG 7) in the revised MR.				
Documentation provided by project participant				
Revised MR Revised ex-post ER calculation sheet				
VVB assessment				**Date:** 24/07/2023
The VVB has assessed the updated MR and ER sheet for the values of active CEPs for VPA along with the calculation to substantiate these numbers which are found to be correct and appropriate. Hence, CAR 06 is closed.				

CAR ID	07	Section no.	E.1	Date : 15/06/2023
Description of CL				
Project developer is requested to kindly update section E.5.1 of MR in accordance with latest applicable template guidelines.				
Project participant response				**Date :** 22/06/2023
The CME has updated section E.5.1 of the revised MR in accordance with the 'Template guide for Monitoring Report, version 1.1' of the GS4GG.				
Documentation provided by project participant				
Revised MR				
VVB assessment				**Date:** 24/07/2023
The updated section E.5.1 of MR has been assessed by the VVB and found to be appropriate and in line with the template guidelines. Hence, CAR 07 is closed.				