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 and GS 11861
Version number of the verification and certification report	2.0
Completion date of the verification and certification report	06/11/2024
Monitoring period number and duration of this monitoring period	2nd monitoring period 30/03/2023 to 30/04/2024 (both dates included)
Version number of the monitoring report to which this report applies	VPA 2- 1.3 VPA 3- 1.3 Dated: 16/10/2024
Coordinating/managing entity (CME)	AGS Carbon Advisory
Project Representative(s)	SPOUTS International
Host Party	Uganda
Applied methodologies and standardized baselines	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	Amounts Achieved	Units/Products
SDG:13 Climate Change	GHG emission reduction	VPA 2 – 58,014 VPA 3 – 41,500	tCO_2e/GS-VERs
SDG: 3 Good Health and Well Being	Reduce Illnesses and Death from Hazardous Chemicals and Pollution. Health quality improvement (qualitative assessment).	VPA2- 99.2% VPA 3- 99.2%	Proportion of population reporting health improvement (qualitative assessment)
SDG: 5 Gender Equality	Average time saving associated with boiling water and fuel collection	VPA 2- 3.32 VPA 3- 3.32	Hours/week
SDG: 6 Clean Water and Sanitation	Proportion of household served with safely managed water services	VPA 2- 15,285 VPA 3- 10,932	-
SDG:7 Affordable and Clean Energy	No. of WPS operational at any time in the VPA	VPA 2- 16,436 VPA 3- 11,755	WPS
SDG:8 Decent Work and Economic Growth	Total no of jobs created. (During distribution and monitoring & Evaluation)	VPA 2- 45 (26 males and 19 females) VPA 3- 16 (7 males and 9 females)	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 Household Water Treatment (HWT) technologies to households & communities in the western region of Uganda, district Kyenjojo distributed in 8 sub-counties. The sub-counties covered under VPA-2 are Buttiti, Kihuura, Kisojo, Kigaraale, Nyabuharwa and Nyantungo . The sub counties covered under VPA-3 are Buttiti, Butunduzi, Kihuura, Kisojo, Kyakatwire,Nyabuharwa and Nyantungo. In the baseline scenario, these households consumed untreated water or used traditional three stone fire stoves/ conventional mud stove, which involved burning of 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.
The VPA implementer for the project is SPOUTS International while the Coordinating and Managing (CME) entity for the project is AGS Carbon Advisory. SPOUTS has been supported by TASC (The African Stove Company) during the implementation of the project.

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.
Two different kinds of baseline scenarios were observed in western Uganda in the pre-project scenario as verified by the VVB from the registered VPA-DDs/02/:

1. 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 30/03/2023 to 30/04/2024 (both dates included). The total GHG emission reductions for the current monitoring period is 58,014 tCO2e for VPA 2 and 41,500 tCO2e 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- 58,014 VPA 3- 41,500	tCO2e 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- 99.2% VPA 3- 99.2%	Proportion of population reporting health improvement (qualitative assessment)
SDG: 5 Gender Equality	Average time saving associated with boiling water and fuel collection	VPA 2- 3.32 VPA 3- 3.32	Hours/week
SDG: 6 Clean Water and Sanitation	Proportion of household served with safely managed water services	VPA 2- 15,285 VPA 3- 10,932	-
SDG:7 Affordable and Clean Energy	No. of WPS operational at any time in the VPA	VPA 2- 16,436 VPA 3- 11,755	WPS
SDG:8 Decent Work and Economic Growth	Total no of jobs created. (During distribution and monitoring & Evaluation)	VPA 2- 45(26 males and 19 females) VPA 3- 16(7 males and 9 females)	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 onsite 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 evidence)
g) Reporting and closure of TR comments/findings (refer Section D.5 of this report) (CARs/CLs/FARs) and final approval for the decision made (refer Section G and H of this report).
h) Issuance of final verification report to contracted CME (or authorized representatives) and submission of request for issuance, as appropriate.

Verification Conclusion

Based on the outcome of the verification process of the "–"GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 2" and "GS11638 GS11640 RVPA-3 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3" for the monitoring period 30/03/2023 to 30/04/2024 (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 16/10/2024/36/.

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 the emission reductions from the registered VPAs –"GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 2" and VPA 3 "GS11638 GS11640 RVPA-3 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3" of registered PoA GS 11638 "SPOUTS Water Purifier Programme in Africa" during the current monitoring period 30/03/2023 to 30/04/2024 (inclusive of both days). This is the second monitoring period which accounts for 398 days for each VPA amounting to 58014 tCO_2e for VPA 2 and 41500 tCO_2e for VPA 3. Both the VPAs (VPA-2 and VPA-3) are small-scale as emission reductions for each VPA are less than 60k tCO_2e/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	Remote Site Visit	Interviews	Validation findings
1.	Team Leader	IR	Phukan	Sukanya	Central office	Y	Y	Y	Y
2.	Verifier	IR	Sengupta	Akanksha	Central Office	Y	Y	Y	Y
3.	Trainee Verifier	IR	Awasthi	Vanshika	Central office	Y	N	N	Y
4.	TA Expert (3.1) and GS Approved Auditor	IR	Phukan	Sukanya	Central office	Y	Y	Y	Y
5.	Local Expert	EI	Khaukha	Julius Sam	Central office	Y	Y	Y	N

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

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

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Erroneous transfer of information from	Low	The documents also undergo regular internal	The records are checked on a sampling basis such

	documented records (POs, distribution records, etc.) to ER sheet/database.		checks to ensure the accuracy of data entry.	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

In accordance with CDM VVS for PoAs, Version 03.0/19/ the prescribed thresholds for materiality for CDM PoAs are as below.
The applicable materiality threshold is 5.0% as PoA comprises small-scale VPAs.

Particulars / Monitoring Report	MR Version (Initial)	MR Version (Revised/Final)
Emission Reductions Achieved (tCO2e) in this monitoring period	VPA 2– 58,026 VPA 3– 41,501	VPA 2– 58,014 VPA 3– 41,500
Applicable Threshold (%) as per CDM VVS for PoAs Version 03.0	5.0%	5.0%

During the assessment all findings were closed and from the sample selected for verification, no systemic or systematic material errors were identified which would have an impact on total emission reductions from the entire population.

SECTION D. Means of verification

D.1. Desk/document review

The verification is performed primarily as a desk review of the documents submitted at various stages of assessments. The review is performed by the assessment team using dedicated protocols (checklists). The assessment team cross checks the information provided in the documents (MR)/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 remote-site inspection: 14/06/2024				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Physical site visit: Households visited (Implementation of PoA)	Western Uganda	14/06/2024	Sukanya Phukan, Akanksha Sengupta, Julius Sam Khaukha
2.	Review of information flows for generating, aggregating and reporting the monitoring parameters			
3.	Cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;			
4.	A check of the monitoring equipment including calibration performance and observations of monitoring practices against the applicable requirements			
5.	Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters			

***Remote audit was conducted for both VPAs.**

D.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	First name	**Last Name**	**Affiliation**			
Interview of the Field Officers of CME						
1.	Juliet	Nanyonga	SPOUTS, Monitoring Head	14/06/2024	Discussion on Programme Design and eligibility criteria	Sukanya Phukan, Akanksha Sengupta, Julius Sam Khaukha
2.	Stellah	Nakakeeto	SPOUTS, Customer Service			

					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 PoA SDG impacts	
3.	Ronald	Ampire	SPOUTS International		Monitoring plan	
4.	Michael	Nimoh	SPOUTS International		Baseline scenario Technical description Additionality Project boundary, Ex-ante and Ex-post parameters	
End Users for VPA 2 and 3*						
1.	Kamaliza	Teopista	End User	14/06/2024	VVB Project and Usage survey.	Sukanya Phukan, Akanksha Sengupta, Julius Sam Khaukha
2.	Turyatunga Edith Mary	Edith Mary	End User			
3.	Tindibakira	Roy	End User			
4.	Bwamkohya	John	End User			
5.	Tumwetabe	Benon	End User			
6.	Tusemerirwe	Agnes	End User			
7.	Turyashemererwa	Winnie	End User			
8.	Tukamushaba	Denavensi	End User			
9.	Kyomuhendo	Violet	End User			
10.	Kunihira	Monica	End User			
WCFT for VPA 2 and 3*						
1.	KUNIHIRA Monic	Monic	WCFT Household	14/06/2024	VVB WCFT Survey	Sukanya Phukan,

2.	Asaba	Monic	WCFT Household			Akanksha Sengupta, Julius Sam Khaukha
3.	Kankwerere	Njeric	WCFT Household			
4.	Kabonesa	Violet	WCFT Household			
5.	Asiimwe	Joseph	WCFT Household			
6.	Turyahabwe	Margret	WCFT Household			
7.	Terimuka	Oliver	WCFT Household			
8.	Ruhweza	Charlice	WCFT Household			
9.	Aliganyira	Richard	WCFT Household			
10.	KABASOMI	Beatrice	WCFT Household			

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?(IMPROVED/UNIMROVED)	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 boiling?	Positively responded

15.	Source of fuel wood (nearby area/forest/local market/etc.) and time taken to arrange it.	Positively responded
No.	**Questions asked by Team member as part of WCFT Survey**	**Nature of responses**
1.	Household Name	Positively responded
2.	Location/Address	Positively responded
3.	Number of people in HH/gender	Positively responded
4.	Serial No. of Water purifier	Positively responded
5.	When did you receive the water purifier?	Positively responded
6.	What is the name of the water purifier model and the capacity of the model?	Positively responded
7.	Is the main source of water an unimproved source (or an improved source)	Positively responded
8.	Was the WCFT conducted at your household? (Confirm the number of days)	Positively responded
9.	Number and quantity of cans filled in one day	Positively responded
10.	Amount of water consumed by the household per day (number of times the filter is refilled per day)	Positively responded
11.	Do you know how to contact SPOUTS in case your water purifier is not working?	Positively responded

Apart from the above-mentioned questions, VVB had also questioned the end users regarding the usage and actual implementation of the project device. All the end users reported to have an operational project device. The actual implemented device was found to be "Purifaaya Regular" as demonstrated in the MR.

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 respondents gave suggestions like being satisfied with 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 VPA 3 "GS11638 GS11640 RVPA-3 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 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 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.

Sample Size:

However, CME has conducted monitoring survey using the CDM Sampling standard "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09. The sample size considered by CME for combined usage and project survey is 120 and for WCFT, the sample size was 31. Therefore, on these sample size monitored by CME, VVB has applied acceptance sampling.
In line with CDM Sampling Standard, paragraph 39(c), "A DOE may select a different sample size than the one indicated in paragraph 32 above, either by choosing a different value for the consumer risk and producer risk (e.g. 20 per cent for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply:
(c) The project activity or the PoA is in a least developed country or a host Party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified."
The VVB has applied the following UQL and AQL to determine the number of samples for VPA 2 and 3 (cross sampling) with 10% producer risk and 20% consumer risk:

Considering the above input values, a sample size of 08 was required as per the referred Standard for this monitoring period. Accordingly, acceptance number (c) thus determined for the sample size is 0.

Reference number	AQL	UQL	Producer Risk	Consumer Risk	Sample Size; Min	Acceptance No.
GS 11640 & 11861	0.5%	20%	10%	20%	8	0

In accordance with 4.1.1.e. of the 'Site Visit and Remote Audit Requirements and Procedures Ver 2.0' as per which in case of remote site visits " 10% additional samples were covered by the VVB . The VVB therefore selected 10 samples from the combined project and usage survey. A further 10 samples were taken for the WCFT Survey. Therefore, the verification team selected the sample size as 20 (10 + 10) households/27/ for the purpose of on-site audit to check the acceptability of CME's sampling results or otherwise. Since CME had applied cross sampling due to homogenous population, the same approach was also applied by the VVB for the sample size calculation.

The Verification team covered a total of 20 samples and observed a few typographical errors related to erroneous reporting of data from the project monitoring survey forms into the project survey calculation sheet. It has now been ensured that all the data is now consistent between the project survey forms and SDG calculation sheet. There were no material errors identified that might have resulted in the overestimation of the SDG impacts.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General	CL#02 CL#03	CAR #01	
Compliance of the monitoring report with the monitoring report form	-	-	-
Remaining forward action requests from previous verification	-	-	-
Specific-case VPA(s) considered for verification and covered in this report	-	-	-
Programme of activities	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline.	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan in a registered PoA-DD (including its generic VPA-DD(s))	-	-	-
• Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline	-	-	-
• Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic VPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case VPAs in the PoA	-	-	-
• Types of changes specific to afforestation and reforestation activities	-	-	-
Voluntary project activities			

Compliance of the VPA implementation with the included VPA design document	-	-	-
Post-registration changes	-	-	-
• Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline	-	-	-
• Corrections	-	-	-
• Changes to the start date of the crediting period	-	-	-
• Inclusion of a monitoring plan to an included VPA-DD	-	-	-
• Permanent changes to the monitoring plan as described in the included VPA-DD, applied methodology, or applied standardized baseline	-	-	-
• Changes to the programme design of the included VPA-DD	-	-	-
• Types of changes specific to afforestation and reforestation component project activities	-	-	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	CL # 05	-	-
• Data and parameters monitored	-	-	-
• Implementation of sampling plan	CL#01	-	-
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	CL#04	-	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	CL#04	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-	-	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case VPA	-	-	-
• Remarks on difference from estimated value in registered VPA-DD	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Others (ER calculation Sheet, Safeguards Reporting etc.)	CL #06 CL #07	-	-

Total	07	01	00

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	No findings were raised.
Conclusion	The verification team confirms the compliance of the monitoring report with the latest version of the GS monitoring report template and the instructions therein for filling out the form.

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

N/A: There were two FARs raised from design review which were resolved during first verification. Subsequently , no FARs were raised during first verification.

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 2. GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3	Yes	VPA 2- 2.7 VPA 3- 2.1 And PoA -DD - 2.3	Yes

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 the 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 VPA 3 "GS11638 GS11640 RVPA-3 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3") that was put together by CME.

VVB has assessed a number of National Climate Policies such as National Climate Change Policy (NCCP), 2015 (https://ccd.go.ug/wp-content/uploads/2018/09/NATIONAL-CLIMATE-CHANGE-POLICY-SUMMARY-VERSION-2018-2.pdf), Uganda Green Growth Development Strategy (UGGDS) (https://gggi.org/wp-content/uploads/2019/03/Uganda-Green-Growth-Development-Strategy-20171204.pdf), Uganda NDC (https://www.mwe.go.ug/library/updated-nationally-determined-contribution-ndc), etc. to confirm that there is no double counting of the project with any national policies of the host country.

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. Under VPA 2 and 3, WPS have been distributed in the Western Ugandan district of Kyenjojo.

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/12/ 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 systems disseminated under the PoA include various models. The water purification systems disseminated in this PoA do not require electricity or continuous tap water and hence, there is no plumbing required.

Technical specifications 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 technical details, as given below, were found to be in line with the registered VPA-DDs/2/ and the manufacturer's specification/12/.

The verification team has confirmed that the model 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 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	16,436
VPA - 3	12,510	11,755
Total	30,001	28,191

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 remote 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 Remote visits with 20 households (10 for usage survey and 10 for WCFT). 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 less 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	62,045	58,014
VPA 03	62,079	41,500

VVB confirms through independent review of host country NDCs that the VERs from the VPAs are not counted under a regulated domestic climate mitigation target or NDC.

The verification team considers the programme description as contained in the PoA-DD/1/ 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, 663 filter replacements were reported, which was verified upon checking the logbook/35/. Additionally, all registered complaints from beneficiaries regarding the WPS were resolved within a span of 4 days which is reflected in the 'WPS parts replacement records' by reviewing the date of the call and the breakage follow-up-dates.
Findings	CL#03 has been raised and resolved.
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. During the current monitoring period, emissions were reduced by 58,014 tCO2e for VPA 2 and 41,500 tCO2e for VPA 3. The following values SDGs were attained in this monitoring period by VPA:

Sustainable Development Goals Targeted	SDG Impact	Amounts Achieved	Units/Products
SDG:13 Climate Change	GHG emission reduction	VPA 2- 58,014 VPA 3- 41,500	tCO2e
SDG: 3 Good Health and Well Being	Reduce Illnesses and Death from Hazardous Chemicals and Pollution. Health quality improvement (qualitative assessment).	VPA 2- 99.2% VPA 3- 99.2%	Proportion of population reporting health improvement (qualitative assessment)
SDG: 5 Gender Equality	Average time saving associated with boiling water and fuel collection	VPA 2- 3.32 VPA 3- 3.32	Hours/week
SDG: 6 Clean Water and Sanitation	Proportion of household served with safely managed	VPA 2- 15,285 VPA 3- 10,932	-

	water services		
SDG:7 Affordable and Clean Energy	No. of WPS operational at any time in the VPA	VPA 2- 16,436 VPA 3- 11,755	WPS
SDG:8 Decent Work and Economic Growth	Total no of jobs created. (During distribution and monitoring & Evaluation)	VPA 2- 45 (26 males and 19 females) VPA 3- 16 (7 males and 9 females)	Jobs

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 received more than 1 purifier. The distribution database/7/ has been verified to confirm that there are no instances of double counting i.e. each household has received its own uniquely labelled WPS It is to be noted that no distribution was undertaken in the current MPs for both VPA 2 and VPA 3 and they were fully implemented in the previous monitoring period itself.

Distributed stoves	**VVB Assessment**

Year	VPA 2	VPA 3	
2022	17491	12510	The VVB has verified the values from the Distribution Database/7/ and the values are found to be consistent in the MR/4/.

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.

Organizational structure of monitoring:

Person	Role
AGS Carbon Programme in-charge	The programme in charge is responsible for overall management of VPAs. The monitored data is assessed and reviewed in line with GS guidelines for preparing the Design Documents, Calculation of ERs and preparing Monitoring Reports.
SPOUTS database administrator	The database administrator was responsible for updating and maintaining all electronic databases related to distribution of the filters. Required competencies included experience with data management systems (e.g. Excel, STATA, or SPSS), a minimum of 2 years working experience in a similar field, and at minimum a Bachelor's degree from an institution of higher education.
SustainCERT and VVB	VVB and SustainCERT ensure that the project adheres to the requirements set forth by GS4GG. Both the bodies will ensure that there is no overestimation of emission reduction during the project cycle.
SPOUTS O&M Team	SPOUTS operation and maintenance team is responsible for the installation, replacement and overall maintenance of the water filters and their components. They ensured all the replacements were

		done successfully during the current monitoring period.
	SPOUTS Monitoring team	The monitoring team was responsible for data collection and conducting surveys. They were assigned by the SPOUTS to conduct the user interviews and appliance tests and hygiene campaign during the monitoring period. The team reports the results to the database administrator. The skills and experience required for the data collection activities included: Experience in conducting surveys/tests Local language skills (especially important for input to questionnaire design and interviewing of end users) English language skills Cultural awareness Numerical proficiency Data entry skills The enumerators had been trained to: conduct combined project and usage surveys, WCFT, collecting samples for microbial contamination analysis (Mq,y), visual assessment of the villages for any improved sources (such as boreholes).
	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 11640 and VPA 3 11861 requesting issuance.	
Findings	CL #02 and CL#03 has been raised and resolved.	
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	The reporting for this issuance has been done technology-wise, thus section E.5 shall be dealing with distribution of WPS and its compliance with PoA-DD/1/ and applicable standard VPA - 2 GS 11640 and VPA – 3 GS 11861 described in this section target the promotion, and distribution 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. The project has been implemented as described in the VPA-DD. There are no changes from the project design. This verification report covers the monitoring period from 30/03/2023 to 30/04/2024 (inclusive of both the dates). An overview of all field project activities is provided in the table below as verified in the verification report/3/:

Date	Activity
VPA 2 -30th March,2022 VPA 3 -19th July 2022	Project start date (Start of WPS distribution)
VPA 2 -30/03/2022- 29/03/2027 VPA 3 -19/07/2022- 18/07/2027	Start of project crediting period
04/04/2024 to16/05/2024.	Combined Project and Usage Survey
02/04/2024 to 05/04/2024	Project WCFTs

Water Purification System:

VPA Ref. #	GS 11640 (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
Estimated ERs (comparable period) (tCO2e)	62,045	62,079
Actual ERs from the CEP Type (tCO2e)	58,014	41,500

VPA 02 - GS11640

WPS were distributed in western Uganda, which is consistent with the description given in the included VPA-DD /2/. During the current MP there were no WPS distributed. The CME is claiming credits for the 17491 WPS distributed during the previous MP. This is in line with the ER sheet/5/ and the distribution database.

It's a small scale VPA and therefore, no thermal savings threshold is applicable. The distributed model of WPS was Purifaaya Regular distributed by VPA implementer (SPOUTS International) and managed by CME. The end users were 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/. A total of 12510 installations have been undertaken till date which is in line with the ER sheet. It is to be noted that There were no WPS distributed during the current MP as confirmed by the VVB during remote interviews with the CME and the end users. During the current MP, the CME is claiming credits for WPS distributed during the previous MP.

The distributed model of WPS was Purifaaya Regular distributed by VPA implementer (SPOUTS International) and managed by CME. The end users were 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/18/ 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 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 30/03/2023 to 30/04/2024 (both dates included).
Findings	CL #04 and CAR#01 has been 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 /06/, 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	No findings were raised.
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 remote audit /38/ during which 20 (10 for usage survey and 10 for WCFT test) 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 WPS's technical features and performance criteria were confirmed from the Manufacturer's specifications/12/ and the report from National Water Quality Reference Laboratory/15/. The VVB confirms that the 'Purifaaya Regular' technology is appropriate even for households that have a household size of >6 members. During the remote site visit conducted for the project, the VVB interviewed 10 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 finding was 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 (%)		
	Minimum 95%	**Maximum of 4% of samples**	**Maximum of 1% of samples**
Coliform count per 100 ml	0	10	100
E. Coli (faecal coliform) count per 100 ml	0	0	1

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.
VVB has assessed the Microbiology Laboratory Test Report issued by Uganda National Bureau of Standards (dated 12/10/2022) and confirms that the health of the water samples are within the aforementioned limits.

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 39 households 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 Cb. VVB has confirmed the same from the Baseline study reports/36/ and from the registered VPA DDs /02/. The VVB team also confirmed the same during remote interviews with the end users, who confirmed that the source of water is stream/runnel arising from unprotected spring water, i.e. the source is surface water.
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: Stove 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 out by various institutions at the time of validation. As per the baseline survey 100% were dependent on traditional cookstoves (95% used three stone fire stoves and 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; xf

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 out 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-CO_2 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 remote audit/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 value has been cross checked from WHO/UNICEF Joint Monitoring Programme for Progress on Household Drinking Water, Sanitation and Hygiene, 2000-2020/51/. 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'/06/ 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 document: Other reference documents: 2019 Refinement to IPCC 2006/44/ Global Forest Resources Assessment 2020 Uganda/46/ Global Forest Resources Assessment 2015/47/ Forest Product Conversion Factors 2020/48/ FAOSTAT on Forest Production and Trade/49/ WWF-Uganda Strategic Plan (2021-2025)/50/ Forest Landscape Restoration Opportunity Assessment Report for Uganda (2016)/52/
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 remote 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 the project device is perceived to be 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 39 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 parameter is 1. The values obtained for this parameter are: **VPA** | **M_q Value** VPA 02 | 1 VPA 03 | 1 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.
	If applicable, has the reported data been cross-checked with other available data?	The data has been cross-checked with the remote 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.
	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 through on-site interviews.
	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/06/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.

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

Relevant SDG Indicator	SDG13: Climate Action	
Means of verification	**Criteria/Requirements**	**Assessment**
	Measuring /Reading /Recording frequency	This parameter is measured every two 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	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 i.e., 02/04/2024 to 05/04/2024, not including weekends and averaged value (l/person/day) was determined after outliers were excluded. The sample size for WCFT was conducted for 31 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 31 samples for conducting WCFT

		and this was conducted for 4 days, i.e 02/04/2024 to 05/04/2024 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-. These values are verified by reviewing the documents provided regarding this test. The value of the parameter as per VPAs are: **VPA** / **Parameter value** VPA 02 / 4.47 VPA 03 / 4.47 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 . VVB has conducted a remote site audit to confirm the WCFT results. These households were exclusive of the households interviewed for combined project and usage survey. All the households confirmed the WCFT survey being conducted in their home. The value is found to be acceptable by the VVB.
	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/36/.
	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	No finding was 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: Filter pot replacement of the Purifaaya regular water filter, Replacement of filter pot;

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 663 filter pots of the beneficiaries 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 remote-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 4 days which was confirmed from the replacement's records /17/. The non-operational days have been discounted while estimating the average technology days, the ERs have been adjusted as confirmed from the ER Sheet and the pots were replaced within 4 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	Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DDs/2/.

	monitoring methodology? (Yes / No)	
	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** | **Location** | **Parameter value** 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/05/ 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

<table>
<tr><td rowspan="5"></td><td>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</td><td>Yes, the frequency in line to the PoA-DD/1/ and VPA-DDs/2/.</td></tr>
<tr><td>How were the values in the monitoring report verified?</td><td>The data was verified during remote audit/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:
<table><tr><th>VPA</th><th>Location</th><th>Parameter value</th></tr><tr><td>VPA 02</td><td>Western Uganda</td><td>94.2%</td></tr><tr><td>VPA 03</td><td>Western Uganda</td><td>94.2%</td></tr></table>
The value was further verified with the survey carried out by CME/39/ and was found to be consistent.</td></tr>
<tr><td>If applicable, has the reported data been cross-checked with other available data?</td><td>NA</td></tr>
<tr><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></td><td></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: 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

<table>
<tr><td rowspan="6">Means of verification</td><td>Criteria/Requirements</td><td>VVB Assessment</td></tr>
<tr><td>Measuring /Reading /Recording frequency</td><td>Annually</td></tr>
<tr><td>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</td><td>Yes, the frequency in line to the PoA-DD/1/ and VPA-DDs/2/.</td></tr>
<tr><td>How were the values in the monitoring report verified?</td><td>The data was verified during Remote 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 discounted while estimating the average technology days (for the 663 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 2</td><td>Western Uganda</td><td>398</td></tr>
<tr><td>VPA 3</td><td>Western Uganda</td><td>398</td></tr>
</table>
The installation date is same as the date of distribution.
This is the second monitoring period which accounts for 398 days for each VPA.
The value was cross-checked with the survey carried out by CME/39/ and was found to be consistent.</td></tr>
<tr><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>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">XX</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</td></tr>
</table>

	discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

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 7.57 hours per day for both the VPAs. The VVB team verified the same during remote interviews with the end users who confirmed the same.
	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	XX	
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 remote-site audit 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. for both the concerned 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	XX	
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 2 | Western Uganda | 5.65 VPA 3 | 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/32/. 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. VVB had conducted a remote audit to confirm the observations from the hygiene campaign. The end users were questioned regarding hygienic practices and difference observed in the frequency of water borne diseases. All the end users interviewed responded to lesser frequency of disease and increased hygiene practices like washing hands.
	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	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 99.2% for both VPAs. VVB has confirmed the same during the remote audit interviews with end users, wherein all of them reported that they had not suffered from any water borne diseases during the concerned monitoring 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.
	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 finding swere raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology /6/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

SDG 6: Clean Water and Sanitation

<table>
<tr><td>Relevant SDG Indicator</td><td colspan="2">SDG 6.1 – Number of households served with safely managed water services</td></tr>
<tr><td rowspan="8">Means of verification</td><td>Criteria/Requirements</td><td>Assessment/Observation</td></tr>
<tr><td>Measuring /Reading /Recording frequency</td><td>Annually</td></tr>
<tr><td>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</td><td>Yes. The frequency is in line with the registered PoA-DD/1/ and VPA-DD /2/.</td></tr>
<tr><td>Monitoring equipment</td><td>Not Applicable</td></tr>
<tr><td>Calibration frequency /interval:</td><td>Not Applicable</td></tr>
<tr><td>How were the values in the monitoring report verified?</td><td>The values were verified by the VVB from the distribution database and also verified by the VVB during the remote audit where 10 households were interviewed by the VVB to check the operationality of the WPS distributed. All the 10 samples were found to be operational. Hence, the data provided in the MR is found to be consistently reported in the MR as well as ER sheet.
The verified values for the current MP are: 15,285 for VPA 2 and 10932 for VPA 3.

VVB has assessed the calculation employed to reach the aforementioned values:

Np,y*(1-Cb)*Up,y*Mq,y

Wherein the values are:

<table><tr><td>Np,y</td><td>VPA 2: 17,491

VPA 3: 12,510</td></tr><tr><td>Cb</td><td>7%</td></tr><tr><td>Up,y</td><td>94.2% for both VPAs</td></tr><tr><td>Mq,y</td><td>1 for both VPAs</td></tr></table></td></tr>
<tr><td>If applicable, has the reported data been cross-checked with other available data?</td><td>Not applicable</td></tr>
<tr><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>In case project participants have temporarily not</td><td>Not Applicable</td></tr>
</table>

	monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	
Findings	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.	

SDG 7: Affordable and Clean Energy

<table>
<tr><td>Relevant SDG Indicator</td><td colspan="2">SDG7: No. of operational WPS</td></tr>
<tr><td rowspan="4">Means of verification</td><td>Criteria/Requirements</td><td>VVB Assessment</td></tr>
<tr><td>Measuring /Reading /Recording frequency</td><td>Annual</td></tr>
<tr><td>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</td><td>Yes, the frequency is in line to the PoA-DD/1/ and VPA-DDs /2/.</td></tr>
<tr><td>How were the values in the monitoring report verified?</td><td>The post monitoring records/05/ were checked to identify as part of the assessment as well as during the interviews conducted with the selected beneficiaries during site visit/38/ the intended beneficiaries who are having access to affordable, reliable and
<table>
<tr><td>VPA</td><td>Number of CEPs disseminated</td><td>Usage Rate</td><td>Number of active CEPs</td></tr>
<tr><td>VPA - 2</td><td>17,491</td><td>94.2%</td><td>16,436</td></tr>
<tr><td>VPA-3</td><td>12,510</td><td>94.2%</td><td>11,755</td></tr>
</table>
modern energy services.

The impact for SDG 7 is calculated as follows:

Number of active CEPs= Number of CEPs disseminated * Usage Rate

Since, the combined project and usage survey determines the usage rate of 94.2% 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</td></tr>
</table>

		sheet. The value of the parameter considered to be VPA 2- 16,436 and VPA 3 – 11,755 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	CL#07 was 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 for VPA 02 and 16 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	XX	

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: 3.32 hours/week for VPA 02 and 3.32 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	No findings were raised.	
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the GS PoA-DD /1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.	

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,"/21/ a statistically valid sample was utilised to calculate the parameter values. For the sampled parameters, a minimum 95% 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- 120 samples
- Water Consumption Field Test- 31 samples
- $M_{q,y}$- 39 samples

For monitoring surveys, the sample size of combined usage and project survey conducted was 120. 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 120 was required for both. The samples covered for WCFT are 31 since the minimum sample required are 30. The number of samples covered for $M_{q,y}$ are 39 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.

Type of Survey	Survey dates	Monitoring survey applicable for this MP?
Combined Project and Usage Survey*	04/04/2024 to 16/05/ 2024	Yes
WCFT Survey**	02/04/2024 to 05/04/2024	Yes
Fraction of samples that pass the microbial quality standard requirement ($M_{q,y}$)	- (samples were collected in April 2024)	Yes

*The previous survey was conducted form 4th April 2023 to 6th April, 2023 would be valid till 4th April, 2024. Given that the monitoring period is from30/03/2023 to 30/04/2024 (both dates included),in order to be conservative, another survey was conducted from 4th April to 16th May 2024 i.e. just after the end of the concerned MP. This allows monitoring data relevant to MP to be captured. This approach has been considered conservative and appropriate by VVB.

**As per the design certified PDD and the GS4GG impact quantification methodology, the frequency of carrying out WCFT in order to determine value for the parameter "QPW_P" is biennial (every two years) therefore the WCFT conducted from 2nd April, 2024 to 5th April, 2024 is valid till 1st April, 2025, hence it is applicable for the second monitoring period (30/03/2023 to 30/04/2024 (both dates included)). VVB has assessed the same and found the frequency of WCFT and found it to be inline with the GS4GG impact quantification methodology, hence the date of WCFT ,has a validity of two year and covers the duration of the concerned monitoring period

RESULTS

Combined Project and Usage Survey

Type of survey	Period of survey	Actual number of samples Conducted	Achieved precision
Usage/monitoring survey	04/04/2024 to 16/05/ 2024	120	10%

WCFT Survey

Water Filter type	Period of WCFT	Actual number of samples (N° of water filters conducted	Achieved precision
Purifaaya Regular	02/04/2024 to 05/04/2024	31	7.8%

Since for the WCFT , the 95/10 precision was followed, and precision attained was 4.7% the mean bound value was considered for ER calculation

Thus, it is confirmed that monitoring survey is applicable for the entire monitoring period.

Findings	CL #01 has been raised and resolved.
Conclusion	The verification team confirmed that the sampling plan and the parameter values are in accordance with the monitoring plan provided in PoA DD/1/ and the VPA DD/2/.

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

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

Means of verification	SDG-13: Climate Action 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)

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

With,

$QPWhh,p,y = \min((qi \times tp,y \times DNp,y), (QPWp \times HNp,y))$

Where:

qi	=	Capacity of the HWT individual project technology (L/h)
tp,y	=	Usage time of the project technology by premises type p in year y (h/day)
DNp,y	=	Average number of individual project technologies in each project premises type p in year y
HNp,y	=	Number of individuals per premises type p (e.g. household, school) in year y
$QPWp$	=	Volume of drinking water per person per day for premises type p (L). Apply the default value or monitored value through water consumption field tests in the project scenario, capped at 5.5 L per person per day.

SDG 3

In the baseline scenario, it is estimated that 100% of the households suffer health issues, either arising out of drinking untreated water (water borne diseases such as diarrhea, vomiting stomach cramps and nausea) or pollution- related inconveniences (such as smoke levels, itchy eyes and breathing problems). Improved health quality i.e. reduced illnesses and death from hazardous chemicals and pollution is a result of the implementation of the project activity.

SDG 5

In the baseline scenario the households were dependent on firewood for boiling water which was fetched/ collected primarily by women. It is estimated that in baseline there was zero time saving w.r.t fuel collection, however post project implementation, the need for firewood for boiling water has gone and hence the quantity of firewood and the time spent collecting it has reduced. This allows the women of the household to invest this free time in other pursuits (economical or otherwise).

SDG 6

In the baseline scenario, t the households in the region were consuming untreated water, which has been confirmed by VVB via the baseline survey results and the interviews with end users. Given that no WPS were implemented, and no households had access to safe drinking water, hence the baseline value is zero. The distribution of WPS is a result of the implementation of the project activity.

SDG 7

In the baseline scenario, it is estimated that no WPS are implemented, hence

	the baseline value is zero. The distribution of WPS is a result of the implementation of the project activity. **SDG 8** In the baseline scenario, it is estimated that no jobs are being generated. Job creation is a result of the implementation of the project activity. 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	No finding was raised.
Conclusion	The verification team verified that: a) A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated under Section E.5.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet/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/ do not prescribe any project emissions to be considered. The onsite visit was conducted, and project design also did not reveal any potential source to be considered in this regard. **SDG 13** Given that the WPS does not require any energy source to operate (fossil fuel or otherwise), there is zero power consumption hence , associated project emissions are also zero. **SDG 3** The monitoring of SDG 3 has been made through a qualitative evaluation of a sample of households during the usage/monitoring survey (physical site visits) to check on the Water borne illnesses (such as diarrhea, vomiting, stomach cramps and nausea) in the project scenario compared to the baseline scenario. Results from this monitoring period show that 99.1%

	of respondents perceive air quality improvements at their homes since purchasing and cooking with the project stove as compared to the baseline**.** VVB verified the same during remote inter view with the end users, wherein all of them reported that there were no instances of water borne health issues in the concerned MP. **SDG 5** The monitoring of SDG 5 has been, again made by evaluation of a sample of households during the usage/monitoring survey (physical site visits) to verify the reduction time consumption associated with fuelwood collection. The women of the household, i.e. the member primarily involved in the collection reported that around 3.32 hours were being saved by each household per week, which would have in absence of the WPS be used in wood collection. This was confirmed by VVB during remote interviews with end users who reported that they utilize the free time in different ways, with most utilizing it in economic pursuits (work in farms etc). **SDG 6** The value is obtained from the number of households having access to potable water. This accounts for the product of number of households where CEPs were distributed, the usage rate , 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 and the ongoing water quality indicated as the fraction of the samples that pass microbial quality standard requirements specified in relevant microbial quality standard for drinking water of the host country are to be met. In this monitoring period, the numbers have been calculated as 15,285 for VPA 2 and 10,932 for VPA 3. These values have been verified from the distribution database, the baseline survey records, usage and monitoring survey records and the water quality test reports /15/. **SDG 7** The parameter 'project technologies in use' has been calculated as part of the outcome calculation for SDG 13 and is provided in the separate ER calculation excel spreadsheet. The number of CEPs distributed are multiplied with the usage rate (Up,y) to determine the 'project technologies in use'. In this monitoring period, the project technologies in use have been calculated as 16,436 for VPA 2 and 11,755 for VPA 3. **SDG 8** The number of created jobs has been determined for the monitoring period. Both Casual and Contract employees have been considered for this parameter.45 jobs have been created in VPA 2 and 16 jobs are created in VPA 3.An employee list has been provided as a supporting document.
Findings	No finding was raised.
Conclusion	The verification team verified that: a) A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated under Section E.5.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet/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	As per the applied methodology/06/, if the ex-ante evaluation shows that leakage emissions are less than 5% of total emission reductions, then no monitoring is needed, and emission reductions simply shall be adjusted 5% down. Therefore, the Emission reductions have been adjusted by 5% to account for leakage emissions. The onsite visit conducted, and project design also did not reveal any potential source to be considered in this regard.
Findings	No finding was raised.
Conclusion	A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated under Section E.5.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet/5/ of final Monitoring Report /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= 61,080 VPA 3= 43,686	-	VPA 2= 58,014 VPA 3= 41,500
SDG 3	Reduce Illnesses and Deaths from Hazardous Chemicals and Pollution. Health Quality Improvement (Qualitative assessment)	-	VPA 2=99.2% VPA 3=99.2%	VPA 2= 99.2% VPA 3= 99.2%
SDG 5	Average time saving associated with boiling water and fuel collection	-	VPA 2: 3.32 VPA 3: 3.32	VPA 2: 3.32 VPA 3: 3.32
SDG 6	Proportion of population served with safely managed water services	-	VPA 2: 15,285 VPA 3: 10,932	VPA 2: 15,285 VPA 3: 10,932
SDG 7	No of WPS operational at any time in the VPA	-	VPA 2: 16,436 VPA 3: 11,755	VPA 2: 16,436 VPA 3: 11,755
SDG 8	Total number of jobs created	-	VPA 2: 45 VPA 3: 16	VPA 2: 45 VPA 3: 16

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#04 was 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 Targ et	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: 62,045 tCO2e VPA 3: 62,079 tCO2e	VPA 2: 58,014 tCO2e VPA 3: 41,500 tCO2e
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/week VPA 3: 1.30 hours/week	VPA 2: 3.32 hours/week VPA 3: 3.32 hours/week
6	Clean Water and Sanitation	VPA 2: 16,275 VPA 3: 16,275	VPA 2: 15,285 VPA 3: 10,932
7	Affordable and clean energy	VPA 2: 17,500 WPS VPA 3: 17,500 WPS	VPA 2: 16,436 WPS VPA 3: 11,755 WPS
8	Decent Work and Economic Growth	VPA 2: 45 jobs (26 males and 19 females) VPA 3: 16 jobs (9 females and 7 males)	VPA 2: 45 jobs VPA 3: 16 jobs

As the result of the VPA-DDs, 62045 tCO2e (for VPA-2) and 62079 tCO2e (for VPA-3) through the VPAs were expected to be reduced within a time frame of 30/03/2023 to 30/04/2024 (both dates included) However, based on monitoring data, actual emission reductions so far are only 58,014 tCO2e for VPA 2 and 41,500 tCO2e for VPA 3 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	CL#05 was 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 the CEP 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 and SDG 5 during the monitoring period in comparison to the value stated in the VPA-DD. As the samples considered in approved PDD were only few samples considered for pilot study whereas the samples actually monitored during current MP were randomly selected following the "Guidelines for sampling and surveys for CDM project activities and programme of activities" and minimum 95% confidence interval and 10% margin of error have been achieved for the sampled parameters, resulting in more reliable estimates.
Findings	No finding was raised.
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 the water filter	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.

	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 d) Modalities on health insurance, 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 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	The VPAs follow the labour laws of the host country Uganda as verified by the VVB from the experts opinion/40/ and ILO standards.

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 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.	

Principle 6.2 Negative Economic Consequences		
1. Does the project cause negative economic consequences during and after project implementation?	The project involves sale of WPS to willing customers within the project boundary. Carbon revenues are important for creating awareness among the end users and strengthening the local sales and distribution services.	N/A as the end users are provided the WPS free of cost.

Principle 7.1 Emissions		
Will the Project increase greenhouse gas emissions over the Baseline Scenario?	The project will reduce the GHG emissions which will be monitored and verified in line with the GS4GG.	N/A as there is no source of emission present being a WPS
Principle 7.2 Energy Supply		
Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	The project does not use energy from a local grid or power supply. Use fuelwood for boiling water in baseline using traditional stoves will be significantly reduced by introducing WPS.	N/A as no energy from the local grid is required for the function of the WPS
Principle 8.1 Impact on Natural Water Patterns/Flows		
Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	The project is a WPS distribution programme and will not affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity.	N/A as the water used is not sourced from natural or pre existing water courses
Principle 8.2 Erosion and/or Water Body Instability		
a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? b. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	The project is a WPS distribution programme and will not directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion.	N/A as this WPS is made of ceramic, no soil will be eroded, hence no disruption of water body is expected
Principle 9.1 Landscape Modification and Soil		

Does the Project involve the use of land and soil for production of crops or other products? >>	The project is a WPS distribution programme and does not involve the use of land and soil for production of crops or other products.	N/A the product being made of clay and saw dust does not require use of land and soil for production of crops or other products.
Principle 9.2 Vulnerability to Natural Disaster		
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions? >>	The project is a WPS distribution programme and will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.	N/A as CEP is WPS which is not vulnerable to natural disasters
Principle 9.3 Genetic Resources		
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)? >>	The Project is not negatively impacted by the use of genetically modified organisms or GMOs.	N/A as the WPS is being used to remove contamination from the water.
Principle 9.4 Release of pollutants		
Could the Project potentially result in the release of pollutants to the environment? >>	The Project is a WPS distribution programme which result in zero GHG emission products and does not result in the release of pollutants to the environment	N/A being a WPS there is no source of emission
Principle 9.5 Hazardous and Non-hazardous Waste		
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	The Project does not involve the manufacture, trade, release, and/or use of hazardous chemicals and or materials.	N/A as the product is prepared using clay and saw dust, no hazardous and non hazardous waste is involved

>>		
Principle 9.6 Pesticides & Fertilisers		
Will the Project involve the application of pesticides and/or fertilisers?	The project does not involve the application of pesticides and/or fertilisers.	N/A as a WPS it does not require the use of pesticide or fertiliser
>>		
Principle 9.7 Harvesting of Forests		
Will the Project involve the harvesting of forests?	The project does not involve the harvesting of forests.	N/A as the WPS is being made of clay and saw dust, no harvesting of forest is necessary
>>		
Principle 9.8 Food		
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	The project does not modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives.	N/A as no kind of food or crop is being used for the manufacture of the WPS
>>		
Principle 9.9 Animal husbandry		
Will the Project involve animal husbandry?	The project does not involve animal husbandry.	N/A as the project being a WPS does not require any product from animals
>>		
Principle 9.10 High Conservation Value Areas and Critical Habitats		
Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	The project is a WPS distribution programme and does not physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified.	N/A as being a WPS project which will be provided to end users, it will not physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified.
>>		
Principle 9.11 Endangered Species		
a. Are there any endangered species identified as potentially being present within the Project boundary	The project boundary is geographical sites of WPS distributed and there are no endangered species identified as	N/A as no endangered species is identified as potentially being present within the Project boundary.

(including those that may route through the area)? b. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	potentially being present within the Project boundary.	

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 remote visit. This is deemed appropriate and acceptable to the verification team. 663 filter replacements were reported, which was verified upon checking the logbook/35/. Additionally, all registered complaints from beneficiaries regarding the WPS were resolved within a span of 4 days which is reflected in the 'WPS parts replacement records' by reviewing the date of the call and the breakage follow-up-dates.
Findings	No finding was raised
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 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 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC in the host country Uganda for the monitoring period 30/03/2023 to 30/04/2024 (both dates included), as reported in the Monitoring Report, Version 1.3 dated 16/10/2024. '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 20/12/2023/36/.

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 16/10/2024.

ESPL, based on outcome of verification activities, certifies in writing that, during the monitoring period 30/03/2023 to 30/04/2024 (both dates included), the registered GS Projects 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 Water Purifier Programme in Africa- WPS in Uganda by TASC – VPA 3" achieved the verified amount of 58,014 tCO2e AND 41500 tCO2e respectively ,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)	
	VPA 2	VPA 3
30/03/2023 to 31/12/2023	40,377	28,883
01/01/2024 to 30/04/2024	17,637	12,617
Total	**58,014**	**41,500**

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	Water consumption field test

Appendix 2: Competence of team members and technical reviewers

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

Name	Akanksha Sengupta		
Education	M.Sc Environmental Studies, University of Delhi B.Sc Zoology, Hans Raj College, DU		
Experience	1 year		
Field	Environment Science and Policy		
Approved Roles			
Team Leader	NO		
Validator	YES (VM)		
Verifier	YES (VM)		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (T.A. 3.1)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	12/07//2024
Approved by	Deepika Mahala (Technical Manager)	**Date**	12/07/2024

Competence Statement	
Name	Vanshika Awasthi
Education	B. tech (Chemical)

Experience	1 + year		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	29/05/2024
Approved by	Deepika Mahala (Technical Manager)	**Date**	29/05/2024

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	Shifali Guleria
Education	M.Sc. (Environmental Studies and Resource Management), TERI University
Experience	3+ year
Field	Climate Change

Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS-I.A., AMS-II.G., AMS-II.E., AMS-III.A.V., AMS-I.D, ACM0002)		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (1.2, 3.1)		
Reviewed by	Deepika Mahala	**Date**	18/02/2022
Approved by	Ashok Gautam	**Date**	18/02/2022

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 2.2 dated 05/06/2023	CME
3.	GS4GG	Validation Report for inclusion of VPA 2 Validation Report for inclusion of VPA 3	VPA 2 VPA 3	Others
4.	GS4GG	Monitoring report template Guide	Version 1.1, published on 14/10/2020	GS4GG
5.	AGS CARBON ADVISORY	SPOUTS_ER calculation sheet	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_VPA 2 (Water filter end-user agreement) Start date proof_VPA 3 (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	-	CME
17.	AGS CARBON ADVISORY	WPS parts replacement record	Dated 2024	CME
18.	AGS CARBON ADVISORY	SPOUTS_LSC Report revised_latest Attendance Sheet-LSC	-	CME

		Email Invitation LSC 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 – Handwashing Campaign Trainers Facilitation Report on Hand Hygiene Activities	September 2023 and March 2024	Others
26.	AGS CARBON ADVISORY	Employment Contract Payslip		
27.	AGS CARBON ADVISORY	Employment record_VPA 2 Employment record_VPA3,	-	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	Attendance list_ Water Hygiene Campaign Invitation letter Report on annual water hygiene campaign		
33.	IPCC	GWP: IPCC AR 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 16/10/2024	CME
37.	UNFCCC	Tool 30: Calculation of the fraction of non-renewable biomass	Version 3.0	CME

38.	ESPL	Remote site visit records	13/06/2024-14/06/2024	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
44.	IPCC	2019 Refinement to IPCC 2006	-	Others
45.	IPCC	2019 Refinement to IPCC 2006	-	Others
46.	FAO	Global Forest Resources Assessment 2020 Uganda	-	Others
47.	FAO	Global Forest Resources Assessment 2015	-	Others
48.	UNECE	Forest Product Conversion Factors 2020	-	Others
49.	FAO	FAOSTAT on Forest Production and Trade	-	Others
50.	WWF	WWF-Uganda Strategic Plan (2021-2025)	-	Others
51.	WHO	WHO/UNICEF Joint Monitoring Programme for Progress on Household Drinking Water, Sanitation and Hygiene, 2000-2020	2000-2020	Others
52.	IUCN	Forest Landscape Restoration Opportunity Assessment Report for Uganda (2016)	2016	Others

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.**		**Date : DD/MM/YYYY**
Description of FAR				
NA				
Project participant response				**Date :** DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				**Date:** DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	**Section no.**	C of the MR	**Date :** 08/07/2024
Description of CL				
The dates of the combined project and usage survey is given as 4th April to 16th May 2024. PP is requested to clarify how the annual monitoring frequency has been met, since the MP falls in 2023 and 2024.				
Project participant response				**Date :** 10/07/2024
The "annual" frequency of combined project and usage survey (as mentioned in the design certifi ed VPA- DD) implies that the surveys conducted for the previous monitoring period i.e. from 04/04/2023 to 06/04/2023 shall be valid till 04/04/2024. Keeping in mind that the second monitoring period (30/03/2023 to 30/04/2024) the VPA implementer (SPOUTS International) has conducted new surveys (from 04/04/2024 to 16/05/2024) for the 2nd monitoring period. The CME therefore clarifies that the VPA implementer has conducted combined project and usage surveys annually as defined in the design certified VPA-DD.				
Documentation provided by project participant				
VVB assessment				**Date:** 15/07/2024
VVB has assessed the frequency of the combined project and usage survey and found it to be inline with the GS4GG impact quantification methodology. Further, it is found appropriate given it provides a more conservative data of the grassroot situation and covers the entire current MP. Finding stands **CLOSED.**				

CL ID	02	**Section no.**	A.2 of the MR	**Date :** 08/07/2024
Description of CL				
It has been observed in the distribution database that the Unique ID of the CEPs are found to repeat, 276 cells have been identified in Row M wherein the UIDs are being repeated, for instance cell 'M 112' and 'M1686' both have UID CM830481058MMJ. PD to clarify the above observed repetition in CEP UIDs and how it potentially leads to double counting. PD shall also expound upon the mechanism to avoid double counting in place currently.				
Project participant response				**Date :** 10/07/2024

There were several households who couldn't provide their UID, therefore they relied on their neighbors/Captain for their UID. That's why there is repetition in the UID number in Column M. As it can been seen that the name and address of those customers are different. Also, there is no duplicates in the Column F which contain the UID number for the WPS. Hence the double counting has been avoided.
Documentation provided by project participant
VVB assessment **Date:** 15/07/2024
VVB has assessed the distribution database and confirms that while the individual user ID s have repetition, each household has individual unique WPS UID, hence negating concerns of double counting. Finding stands **CLOSED.**

CL ID	03	**Section no.**	A.1 of the MR	**Date :** 08/07/2024
Description of CL				
Kindly clarify if 17,491 and 12,510 WPS have been distributed for VPA 2 and VPA 3 respectively for the current monitoring period or since project start date, given that the distribution database indicates the WPS were distributed in 2022, and the monitoring period is from 30th March 2023 onwards.				
Project participant response				**Date :** 10/07/2024
No further distribution of the water filters happened in the current MP. The distribution that happened in the last Monitoring Period (30/03/2022-29/03/2023) has resulted in 58,014 tCO_2e and 41,500 tCO_2e emission reductions for VPA 2 and VPA-3 respectively.				
Documentation provided by project participant				
VVB assessment				**Date:** 15/07/2024
VVB has confirmed from the distribution database that no new WPS has been distributed un the second monitoring period. The same has been stated in the Monitoring report and the verification report. Finding stands **CLOSED.**				

CL ID	04	**Section no.**	E.4 and E.5 of the MR	**Date :** 08/07/2024
Description of CL				
1. As per section E.4 of monitoring report for SDG 13 the baseline estimate (61,080 and 43,686 for VPA 2 and VPA 3 respectively) and net benefit (58,026 and 41,501 for VPA 2 and 3 respectively) are different, even while project emissions remain zero. 2. PD to clarify the above discrepancy and revise the calculations for VPA 13.				
Project participant response				**Date :** 10/07/2024
The values have been updated in the MR v1.1 dated 10/07/2024				
Documentation provided by project participant				
VVB assessment				**Date:** 15/07/2024
VVB has assessed the revised MR and cinfrims that all values are in line with the ER sheet. Finding stands **CLOSED.**				

CL ID	05	**Section no.**	E.5.1 of the MR	**Date :** 08/07/2024

Description of CL
The MR mentions that the reason for increased ER in the monitoring period as compared to that in the registered VPA-DD is because "The values mentioned in the approved VPA-DD were based on the assumption that all the devices (Purifaaya Regular) have been operating for 366 days however as the cross-VPA sampling has been done for VPA-2 and VPA-3 therefore all the devices covered under VPA-3 (which has a start date of 19th July,2022) have been operating for 398 days under the current monitoring period ", however as per ER sheet, tab 'ER Summary' Cells 'C46' and 'C63", the ex-ante values have been extrapolated for the duration of the concerned monitoring period i.e 398 days. PP to revise E.5.1 of MR in light of the above observation.
Project participant response **Date :** 10/07/2024
Section E.5.1 of the MR v1.1 dated 10/07/2024 has been updated.
Documentation provided by project participant
VVB assessment **Date:** 15/07/2024
VVB has assessed the revised MR and confirms that section E.5.1 has been duly updated to include an appropriate explanation. Given that ERs achieved are less than

CL ID	06	**Section no.**	F of the MR	**Date :** 08/07/2024
Description of CL				
Principle 9.5 of Section F. 'Safeguards Reporting' pertains to both 'Hazardous' and 'non-hazardous' waste, however PD's explanation of the PA's impact on the same only involves mention of 'hazardous waste'. PD shall update the section to include non-hazardous waste and elaborate upon the end-of-life disposal of the water purifiers distributed in both VPAs.				
Project participant response **Date :** 10/07/2024				
The lifespan of the WPS is 8 years and after the water filters complete their lifespan, they will be disposed in accordance with the National Environment (Waste Management) Regulations, 2020. Details related to the end of life and a footnote has been added under section B.1 of the MR v1.1				
Documentation provided by project participant				
VVB assessment **Date:** 15/07/2024				
VVB has confirmed during remote site audit that the lifespan of the WPS is of 8 years and given that the project is undergoing second verification, concerns regarding 'end of life' are not applicable currently. However, in the reeveant MP, the same dhall be verified by subsequent VVBs. Finding stands **CLOSED.**				

CL ID	07	**Section no.**	ER Sheet	**Date :** 08/07/2024
Description of CL				

1.PP is requested to clarify if households using improved sources were considered in the survey. VVB could not establish any question regarding drawing water from improved sources in the "Usage and Project Sheet" provided by the PP. 2.In ER Sheet tab "Combined project & usage survey" a. Under Column S, end users have reported not having handwash facility. PP is requested to clarify how successful is the hygiene campaign considering that a large fraction of the people still lack basic hygiene practices. b. In column AA, PP is requested to justify the rationale behind considering 24 hours of usage of the Purifayaa. Further, there are households where the usage is mentioned as 0 h/day. PP is requested to clarify how this value is justified and why no non-functionality is accounted for these households. c. Column AG: PP is requested to clarify how filter being wet and water below the filter is justified as sign of usage of the filter.
Project participant response **Date :** 10/07/2024
Documentation provided by project participant

1. The CME clarifies that in-line with the approach described in the design certified VPA-DD, the VPA implementer (SPOUTS International) had asked questions regarding whether "the households are obtaining water from improved sources" during the combined project and usage survey. In response to the question none of the household was found drawing water from an improved source during the combined project and usage survey. In order to trace the question, the VVB is requested to refer "Column AT" of the tab "Project and Usage Survey" of the ex-post ER calculation sheet v1.1

2.a) The impact of the hygiene campaign can be established by comparing the results of the campaigns conducted during the current MP with the results of the campaign conducted during the previous MP.

As per the results of the campaign conducted in the previous MP, 90% of the households did not have access to handwashing facilities whereas during the current MP this percentage has fallen to 14% which clearly indicates that the hygiene campaigns conducted by the VPA implementer (SPOUTS International) have been very effective in spreading awareness about hygienic practices.

b) The CME clarifies in response to question asked in column W of the expost ER calculation sheet, if a household indicates that the "Purifaaya water filter is used 24 hours on a daily basis" it implies that the Purifaaya Regular filter remains filled with water throughout the day as the households fulfil their daily water requirements by refilling the filter multiple times in a day.

In the ER sheet, under the tab "Usage and Project Survey" column "AA" There is no household with zero hour/day usage time. VVB to review the finding.

c) The VPA implementer (SPOUTS International) has conducted the combined project and usage survey as per the "Usage Survey Guidelines for HWT technologies" specified under annex-1 of the GS4GG 'Methodology for Emission Reduction from Safe Drinking Water Supply, version 1.0'. The topic4 of the guidelines directs the enumerators to observe signs of usage (such as wet filters, water in storage receptacle, dust on filter, hanging properly etc.) in order to determine whether the unit has been used recently thereby helping in identifying non-users of the technology.

Inline with the guidelines, the VPA implementer (SPOUTS International) had trained the enumerators to observe such signs of usage during the combined project and usage survey. Upon inspecting thehousehold premise, the enumerators found that the filter component of the 'Purifaaya technology' was wet and there was water on the ground below the filter which clearly indicated the households had recently refilled the water filter/opened the tap of the technology to obtain safe drinking water from the filter thereby accidentally dropping water on the floor which inturn indicated that these households were users of the technology.

VVB assessment	**Date:** 15/07/2024

1. VVB has assessed the ex post ER sheet and confirms that question regarding whether "the households are obtaining water from improved sources" was asked and data was recorded during the combined project and usage survey. Further, it was confirmed during RSV observations that no households used to draw water from safe sources in baseline
2.

a) A. VVB has assessed the monitoring survey from the previous and current monitoring period and confirms that there has been a significant increase in households have access to handwashing facilities, which confirms the impact of the PP's hygiene campaigns.

b) B.VVB has assessed the updated ER sheet and confirms that the inconsistencies noticed regarding to usage hours of the WPS have been rectified. CLOSED.

c) VVB confirms that the monitoring survey and the observational criteria for usage are in accordance with the "Usage Survey Guidelines for HWT technologies" specified under annex-1 of the GS4GG 'Methodology for Emission Reduction from Safe Drinking Water Supply, version 1.0'. The signs of usage hence employed i.e. wetness of filter is found to be appropriate. CLOSED.

Finding stands CLOSED.

Table 3. CAR from this verification

CAR ID	01	**Section no.**		**Date :** 08/07/2024
Description of CAR				
1. In KPI table, PP is requested to provide the name and GD IDs of the validated VPA. 2. The value of ERs mentioned for VPA 2 in Table 1 of the MR is inconsistent with the ER Sheet tab "ER Summary", cell no. C12.				
Project participant response				**Date :** 10/07/2024
1. The CME has updated the KPI table of the MR by providing the title and the GS IDs of the validated VPAs. 2. The ERs mentioned under table1 have been updated in the MR. The revised MR and the e xpost ER calculation sheet are now consistent with respect to the value of the ERs.				
Documentation provided by project participant				
VVB assessment				**Date:** 15/07/2024
VVB has assessed the revised Monitoring Report and confirm that: 1. The KPI table has been updated to include the title and GS IDs of all validated VPAs. 2. Table 1 has been updated to be consistent with the ER Sheet. Finding stands **CLOSED.**				

Table 4. FAR from this verification

FAR ID	NA	**Section No.**		**Date :** DD/MM/YYYY
Description of FAR				
XX				
Project participant response				**Date :** DD/MM/YYYY

Documentation provided by project participant
VVB assessment | **Date:** DD/MM/YYYY

There are no FAR from this verification.