

VERIFICATION & CERTIFICATION REPORT

AQUA CLARA WATER FILTRATION PROGRAM IN KENYA

(GS Ref. No. 1078)

Seventh Monitoring Period

19/02/2020 – 18/02/2021 (Including both the days)

REPORT No.
GS.21.VER.013 MP07

Date of this issue: 27/10/2021		KBS Ref. No.: GS.21.VER.013.MP07	
Project Title:		Aqua Clara Water Filtration Program in Kenya	
Organization:		KBS Certification Services Pvt. Ltd.	
Client:		Aqua Clara International	
Monitoring Period:		19/02/2020 – 18/02/2021 (including both dates)	
Summary:			
KBS Certification Services Pvt. Ltd. has performed the 7th periodic verification of the GS4GG project Aqua Clara Water Filtration Program in Kenya and Gold Standard Ref. Number 1078. The verification includes confirming the implementation of the monitoring plan of the registered PDD and the application of the monitoring methodology as per “Technologies and Practices to Displace Decentralized Thermal Energy Consumption”, version 01. A remote audit was conducted to check the implementation of registered monitoring plan and verify the data submitted in the monitoring report. KBS confirms the following has been reviewed; (a) The registered PDD, GS passport and the monitoring plan, and the corresponding validation opinion; (b) The validation report; (c) Previous verification reports, if any; (d) Transition annex (approved by GS) (e) The applied monitoring methodology(ies); (f) The monitoring report to verify that it is as per the standardized format; (g) Any other information and references relevant to the project activity’s emission reductions (e.g. IPCC reports, laboratory analysis and national regulations); (h) ER calculations sheets and all supporting documents; KBS Certification Services Pvt. Ltd. confirms that the monitoring system is in place, claimed SDG contributions and the emission reductions are calculated without material misstatements. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 28,429 tCO₂e emission reductions during period 19/02/2020 – 18/02/2021 (Including both the days).			
Subject Group:	Sectoral Scope(s):	Methodology:	
GS4GG Verification	1, 3, 13	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, version 01	
Verification Team:		Monitoring report:	
Team Leader, Technical Expert (13.1)	Deboshmita Dey	First version	17/06/2021
Technical Expert (1.1, 3.1), Local Expert	Sanjay Kandari	Final version	25/10/2021
Independent Technical Reviewer Team		Verification status:	
Date: 27/10/2021			
Technical Reviewer	Tushar Chaudhari	☐ Findings not closed.	
Technical Expert (1.1, 3.1, 13.1)	Tushar Chaudhari	☐ Draft verification opinion	
Manager T&C	Tushar Chaudhari	☒ Final verification opinion	
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Managing Director	Kaushal Goyal	☒ No distribution without permission from client	
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Abbreviations

ACI	Aqua Clara International
BE	Baseline Emissions
BSF	Bio Sand Filter
CAR	Corrective Action Request
CAWST	Centre for Affordable Water and Sanitation Technology
CDO	Community Development Officer
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CL	Clarification Request
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
GHGs	Greenhouse Gas(es)
GIS	Geographic Information System
GS	Gold Standard
GS4GG	Gold Standard for Global Goals
GS-VER	Gold Standard Voluntary Emission Reduction
GWP	Global Warming Potential
HHFF	Household Hollow Fibre Filter
IHFF	Institutional Hollow Fibre Filter
ISO	International Organization of Standardization
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
KPT	Kitchen Performance Test
LE	Leakage Emissions
MR	Monitoring Report
MP	Monitoring Plan
NCV	Net Calorific Value
NRB	Non-Renewable Biomass
PE	Project Emissions
PDD	Project Design Document
PFT	Project Field Test
QA/QC	Quality Assurance/Quality Control
SAM	Sand and Membrane Filter
SD	Sustainable Development
SDG	Sustainable Development Goals
VVB	Validation and Verification Body
VVS	Validation & Verification Standard
WCFT	Water Consumption Field Test
WHO	World Health Organization

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1. INTRODUCTION

1.1 Objective

KBS Certification Services Pvt. Ltd. has been commissioned by “Aqua Clara International” to perform an independent verification of its registered GS project “Aqua Clara Water Filtration Program in Kenya”, GS: 1078 for the reported GHG emission reductions for the given monitoring period 19/02/2020 – 18/02/2021 (both dates included). The Gold Standard projects must undergo independent third-party verification and certification of emission reductions as the basis for issuance of Gold Standard Voluntary Emission Reductions (GS VERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the registered PDD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The actual monitoring systems & procedures and monitoring report conforms with the requirements of the approved monitoring plan and the approved monitoring methodology;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- The project documents meet the requirements of the GS4GG.

1.2 Scope

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on review of monitoring report, supporting information and

- (a) The registered PDD, including the monitoring plan, GS passport, Transition Annex and the corresponding validation opinion(s);
- (b) Previous verification reports, deviation requests, requests for revision of monitoring plan;
- (c) Monitoring report for the monitoring period under verification including GS VER calculations sheets and all supporting documents;
- (d) The applied monitoring methodology;
- (e) Relevant decisions, clarifications and guidance from the CMP and the Gold Standard Board and the requirements of the GS4GG.
- (f) All information and references relevant to the project activity's resulting in emission reductions

The project is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

KBS has, based on the recommendations in the latest version of Gold Standard for Global Goals (GS4GG) and CDM Validation and Verification Standard, employed a rule-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

1.3 Description of the Project Activity

Title of project activity:	Aqua Clara Water Filtration Program in Kenya
Gold Standard Id:	GS 1078
Applied methodology:	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, version 01
Start date of crediting period:	28/12/2011
Project Participants:	Aqua Clara International
Location of the project activity:	Kenya, The project activity is spread across 23 Counties.

The project activity aims at GHG reduction through implementation of the ACF Bio Sand Filter (BSF), Household Hollow Fibre filter and the Sand and Membrane (SAM) large-scale filter. These ACF water purifiers displace the use of firewood fuel traditionally used to boil water for domestic consumption and in the alternative offer an affordable, long-term solution for households that typically consume raw water from turbid sources. The project activity seeks to introduce approximately 7,424 BSF purifiers with a capacity of up to 60 liters per day, 1,842 household Hollow Fibre Filters (HFF) with a capacity of up to 15-100 litres per day and 425 Institutional/Commercial-use HFF units with a production capacity of 100 – 400 litres of water per day throughout the 10-year crediting period in rural and peri-urban Kenya.

The project technologies offer an affordable, clean, efficient, and easy-to-use alternative for water purification within the rural area that the project activity seeks to operate in. In addition, the project activity will actively reduce CO₂ emissions and diminish the associated risks of Indoor Air pollution.

As of 18/02/2021, the PP has installed a total of 3,215 Bio-Sand Filters, 2,212 Domestic HHFF, 192 Institutional/ Commercial-use HFF units used for domestic and institutional use in the project boundary. Also, few grievances of breakdown were reported during the monitoring period that required minor repair and maintenance, as verified from the interviews with the users and through grievance log book/database/24/. A total of 21 BSF filters were repaired, 14 of them had a total of 93 days where they were not operational. For HHFF, 66 repairs were done, however only 35 filters had repairs which led to loss of operation days. A total of 54 operation days were lost. Additionally, 3 IHFF were repaired which led to a total of 5 days when they were not in operation. Emission reductions for the total number of days the filters were not operational have been calculated and deducted from the total ERs claimed as cross-checked by the verification team in the ER sheet/06/.

The emission reductions achieved during the current monitoring period starting from 19/02/2020 – 18/02/2021 (including both days) is 28,429 tCO₂e.

2. METHODOLOGY

KBS follows a rule-based verification approach, wherein, as a first step, the contract review is undertaken as per latest version of CDM Accreditation Standard. Subsequently, after the contract is signed, the monitoring report of the project activity is reviewed in accordance with Gold Standard rules. Since the Gold Standard prescribes the application of CDM rules and guidelines which are followed along with the Gold Standard rules for GS4GG.

A desk review of the project documentation is undertaken, which is followed by a remote audit by the members of verification team in accordance with the latest version of GS4GG Rules. The verification protocol is filled by the verification team that is based on standard auditing practices and latest version of CDM VVS, to capture the assessment of applicable CDM and GS4GG requirements viz., latest version of CDM Project Standard, GS4GG Standards, registered PDD, applied methodology/ies and/or tools and recent decisions. The verification protocol provides transparent means to record the observations and compliances by the verification team members and the nonconformities, if any. The verification protocol is an internal document and is available on request. Following are the major milestones for the verification under consideration.

Duration of verification

<i>Verification Contract</i>	21/06/2021
<i>Offsite remote audit assessment</i>	08/07/2021 & 09/07/2021
<i>Draft Verification Report</i>	13/07/2021
<i>Final Verification Report</i>	27/10/2021

2.1 Review of Documentation

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- 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 is included in the section 'References'

2.2 Site Visits

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit.

However as per the COVID 19 Interim Measures by GS4GG, the VVB may use alternative measures for auditing like remote audits.

As per para 4.1.1 (b) of COVID 19 Interim Measures, Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification of the PA. Along with desk review, audit team has conducted remote audit interview corresponding to the PA as follows:

- A complete desk review of the MR (initial and final versions), as well as all applicable country legal requirement and supportive evidences have been checked by the verification team.
- Verification team has performed Zoom Application interview with Aqua Clara and project beneficiaries in order to check implementation of the monitoring plan, current situation, evaluation of data management, QA/QC system, management system of the PA, project technology, location, trainings, SD parameters etc. Interview questions were filled as per Verification team interview checklist and also videos were captured. Cross checks between information provided by interviewed personnel (i.e. by checking sources) to ensure that no relevant information has been omitted.
- Total 19 users were inspected through telephonic conferencing and interviewed in order to assess the baseline practice and usage of water filters in the project case for PA.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in the MR and supporting documents.

Details of interviewees, topics covered and additional information presented below;

Dates	08/07/2021 & 09/07/2021	
Key points discussed	Name of person interviewed	Designation, Organization
Operational data Data collection QA/QC procedures Monitoring Survey and GS Indicators*	Josephine Orare	MEE Officer, Aqua Clara Kenya
Calculation of ERs	Sally Gakii	Project Manager, ClimateCare
GS requirements	Sally Gakii	Project Manager, ClimateCare
Monitoring Surveys (VVB): The end users were interviewed on their name, household/organization size, location, monitoring surveys conducted by PP, water consumption, serial number, date of installation, filter model, usages of filters, pre-project scenario, condition of filter, replacement or maintenance in past, sustainable development indicators, operational status of the filter, water quality tests and other points based on local conditions and VVB judgement.	Household End Users (mentioned in the Annex 1 of the report) * Telephonic interview (as per network coverage and gadget availability and end user's comfort)	Kenya

The summary of end user interview observations has been incorporated in the Annex -1 of this report.

2.3 Reporting of Findings

During the course of verification, the findings may be raised as under;

CAR is raised if one of the following occurs:

- Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;

*List is indicative, many other households were interviewed during the remote audit.

- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM/GS4GG requirements have been met.

FAR is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

The verification report contains (section 7) all CARs, CLs and FARs raised during this verification in transparent manner and provides clear information of the issues raised, response received and its resolutions, including the changes in the documents.

2.4 Verification Assessment

Based on the desk review and remote audit, the team leader follows the verification protocol to identify and record the findings in the context of the project activity. The findings are communicated to the client in the findings document (section 7 of report). The project documentation, including responses to the findings is reviewed by the team leader in consultation with team members, wherever appropriate. The team leader prepares the draft verification report subject to closure or non-closure of the findings.

2.5 Internal Quality Control

The draft verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by KBS are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable GS4GG requirements.

The independent technical reviewer may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before the request for issuance is submitted to Gold Standard. The final decision is taken by the Manager Technical and Certification. The technical reviewer and Manager T&C can be same person.

The final decision is authorized by Managing Director, KBS once the report is approved by the Manager T&C.

3. VERIFICATION FINDINGS

3.1 Remaining Issues (FARs from Previous Validation or Verification)

Discussion:

One FAR was raised during the 6th periodic verification by VVB during the issuance and five FARs raised by GS during performance review assessment for 6th periodic verification. The same FARs were communicated to PP as FAR#01 to FAR#06 during this current verification. The response provided by PP were assessed adequate by the verification team and therefore closed the FARs.

3.2 Compliance of project implementation with registered PDD

Discussion:

The project activity consists of implementation of water filters in the households across 23 counties across the host country Kenya. To date, a total of 3,215 Bio Sand filters have been installed of which 2,952 are for domestic use whereas 263 are for institutional use and 2,212 HHFF units have been installed for domestic use and 192 institutional hollow fiber filters used in the institutions. Filters have been distributed in 17 counties namely Kisii, Nyamira, Uasin Gishu, Nandi, Bomet, Kericho, Nairobi, Nakuru, Kisumu, Siaya, Migori, Homa Bay, Trans Nzoia, Machakos, Murang'a, Kakamega and Elgeyo Marakwet. There are no operational large scale SAM filters during this monitoring period. The same has been checked from the project sales record /10/ and also during remote audit.

Annual BSF Filter sales since start date of the project:

03/09/2009*-02/09/2010: 199 filters
03/09/2010-02/09/2011: 538 filters
03/09/2011-02/09/2012: 918 filters
03/09/2012-02/09/2013: 629 filters
03/09/2013-02/09/2014: 454 filters
03/09/2014-02/09/2015: 187 filters
03/09/2015-02/09/2016: 149 filters
03/09/2016-02/09/2017: 86 filters
03/09/2017-02/09/2018: 40 filters
03/09/2018-18/02/2019: 15 filters
Total: 3,215 filters

Annual HHFF sales since start date of the project:

01/11/2013-31/10/2014: 95 filters
01/11/2014-31/10/2015: 194 filters
01/11/2015-31/10/2016: 366 filters
01/11/2016-31/10/2017: 287 filters
01/11/2017-31/10/2018: 510 filters
01/11/2018-31/10/2019: 555 filters
01/11/2019-18/02/2020: 205 filters
Total: 2,212

*The first BSF filter was sold on 26/06/2009. However, following the TSR clean-up exercise that was done, some of the filters that were no longer functional have been removed from the sales record. The vintage years have therefore been revised to reflect this change.

Annual IHFF sales since start date of the project:

19/06/2014-18/06/2015: 19 filters
19/06/2015-18/06/2016: 5 filters
19/06/2016-18/06/2017: 16 filters
19/06/2017-18/06/2018: 22 filters
19/06/2018-18/06/2019: 69 filters
19/06/2019-18/02/2020: 61 filters
Total: 192

The current verification includes monitoring period starting from 19/02/2020– 18/02/2021 (Including both the days). The project started commercial operation in July 2009. The company has its distribution network that involves the use of Community Development Officers (CDOs) and Community Health Promoters (CHPs) who work within the various communities under which Aqua Clara serves. At the time of installations of BSF/HHFF filters, households are issued with receipts and each filter is assigned a unique identification number to avoid double counting. The same has been evidenced from TSR and sample frame excel sheet review /7.2/ and end users interview during the remote audit.

PP Sampling Plan:

As per the sampling approach defined in the revised PDD, Systematic Sampling method was used to determine the test subjects from the total sales record.

- a) The monitoring surveys (conducted physically) cover the duration from 07/04/2021 to 04/06/2021. A total of 15 households for the Bio Sand Filters, 33 households for the household HHFF and 33 for Institutional were surveyed.
- b) Water consumption field test was conducted on 3 households for the Bio Sand Filters, 5 households for the household HHFF and 4 for Institutional IHFF.
- c) PP has conducted the telephonic usage survey from 12/04/2021- 04/06/2021 and a total of 312 households for the Bio Sand Filters, 231 households for the household HHFF and 128 for Institutional IHFF were surveyed.

Project participant again tried to contact replaced households and a conclusion was taken whether the replaced household are user or non-user and considered accordingly in the usage survey calculation. The final frame for usage rate was considering the original households and the new households selected for the compensation against the replaced households. During the follow ups of original households, some households were found to be not traceable and hence not considered for the usage rate calculation. Final weighted usage rate is calculated considering all these factors. The calculation of the sample size for the monitoring surveys for the BSF units was based upon a 0.7 Coefficient of Variation under a 90/30 approach as mentioned in the PDD and also in Table 3 of Annex 4 of the approved Gold Standard baseline and monitoring methodology.

VVB Sampling

VVB had applied the acceptance sampling in accordance with the paragraph 27-33 of the “*Standard: Sampling and surveys for CDM project activities and programme of activities, version 09*”. KBS verification team carried out the random sampling from the PP’s database records and checked (using its professional judgment) the acceptability of the data for each record in the PP’s database records. The VVB has determined acceptance sample size based on the “Table. Sample size and acceptance number based on AQL, UQL, and producer and consumer risks” of standard “Sampling and surveys for CDM project activities and programmes of activities” version 09.0.

For the determination of VVB’s acceptance sample size, verification team has selected the following using its professional judgment:

1. Acceptable quality level (AQL) – 0.5%
2. Unacceptable Quality Level (UQL) – 15%
3. Producer risk -10%

4. Consumer risk -5%

Verification team has determined acceptance sample size for all the survey parameters based on the "Table. Sample size and acceptance number based on AQL, UQL, and producer and consumer risks" of standard "Sampling and surveys for CDM project activities and programmes of activities" version 09.0. From the above factors, the verification team determined the minimum sample size (n) as 19 and acceptance number (c) as 0. The VVB interviewed the end users and filled the VVB survey form to check the acceptability of the data for each record in the PP's database records.

The actual number of sample size where the acceptance survey was done given below:

Parameters/A spects	Total Population	PP's sample size	Acceptanc e sample size	Acceptanc e Number	Sampling method used
Type of product, Unique id of filters, name of user and address household/org anization size, location, monitoring surveys conducted by PP, water consumption, serial number, date of installation, usages of filters, pre-project scenario, condition of filter, replacement or maintenance in past, sustainable development indicators, operational status of the filter, water quality tests	3,215 Bio Sand filters 2,212 HHFF units and 192 institutional hollow fiber filters	Monitoring surveys: 15 households for the Bio Sand Filters, 33 households for the household HHFF and 33 for Institutional Usage Survey: 312 households for the Bio Sand Filters, 231 households for the household HHFF and 128 for Institutional IHFF- for usage survey WCFT: 3 households for the Bio Sand Filters, 5 households for the household HHFF and 4 for Institutional IHFF	19 samples out of PPs sample (refer to details in Annex-1)	0	Acceptance Sampling based on random selection of households/institutions out of PPs sample.

Findings:

CAR 1, CAR 2, CAR 3, CL 01 was raised during the verification process which was subsequently closed. This is discussed in detail in section 7 of this report.

Opinion:

- In opinion of the assessment team the implementation and operation of the project activity is in compliance with the description in the revised PDD/1/. However, the filters sold are less than the estimated in the PDD for the corresponding period.

- b) To date the PP has installed a total of 3,215 Bio Sand filters have been installed for domestic use and 2,212 HHFF units for domestic use and 192 institutional used for domestic and institutional use in the project boundary. The filters installed during this verification period as verified from the sales records.
- c) The verification team reviewed the revised PDD, including the monitoring plan and the corresponding validation report and the applied monitoring methodology, GS4GG requirements and found that the MR for this monitoring period is line with all the above-mentioned documents.
- d) The actual emission reductions for the current monitoring period are 28,429 tCO₂e which has been found appropriate.

3.3 Compliance of monitoring plan with the monitoring methodology including applicable tool(s)

Discussion:

The monitoring plan mentioned in the monitoring report/4/ is in line to the revised PDD/1/ and passport/3/, transition annex and in accordance with the approved methodology applied by the project activity, i.e., Technologies and Practices to Displace Decentralized Thermal Energy Consumption" (Version 1.0)/5/. All the ex-post monitoring parameters as per the applied methodology/5/ are included in the monitoring report/4/ and ER sheet/6/.

Also, the registered PDD refers to the frequency of conducting the WCFT as annually however the PP would like to amend this frequency to every other year (biennially), which was approved by GS on 16/09/2016. The methodology employed for this project, i.e. 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption' version 01 dated 11/04/2011 states:

'For each baseline scenario and project scenario the BFT and PFT is updated every two years, Respectively"',

At registration, the PP had chosen a conservative approach of annually monitoring this parameter, however, the PP now wishes to conduct this as per the methodological threshold of once every 2 years. Seeing as the PP has conducted this exercise the past 3 monitoring periods back to back, the parameters related to this exercise would remain fixed in the next verification.

Findings:

N/A

Opinion:

The monitoring plan mentioned in the revised PDD is in line with the applied methodology i.e., Technologies and Practices to Displace Decentralized Thermal Energy Consumption (Version 1.0)/5/. The monitoring mechanism is in line with the methodology and is effective and reliable.

3.4 Post registration changes, if any

The PP proposed 2 permanent changes to the registered monitoring plan and approved by GS before the 2nd issuance:

1. Cj Factor fixed ex-ante:

The Cj factor that was previously a monitored parameter is now fixed ex-ante. This is in compliance with the registration review FAR that stated:

*Page 22 of the referenced methodology

“The PP shall conduct a post registration baseline survey/water boiling tests prior to 2nd issuance considering in a representative way the target population in the project boundary and considering households prior to adopting the project technology”

The PP conducted the baseline testing in accordance to the Gold Standard methodology. The Household Cj factor is 18%, fixed ex-ante.

2. Biennial Monitoring of the Water Consumption per filter end user per day:

The registered PDD refers to the frequency of conducting the WCFT as annually. The PP would like to amend this frequency to every other year (biennially). The methodology employed for this project, i.e. ‘Technologies and Practices to Displace Decentralized Thermal Energy Consumption - 11/04/2011’ states:

‘For each baseline scenario and project scenario the BFT and PFT is updated every two years, respectively’,

At registration, the PP had chosen a conservative approach of annually monitoring this parameter, however, the PP now wishes to conduct this as per the methodological threshold of once every 2 years. Seeing as the PP has conducted this exercise the past monitoring periods back to back, the parameters related to this exercise would remain fixed this verification as the Gold Standard Foundation has approved this permanent deviation.

No PRC initiated during the current verification.

3.5 Compliance of monitoring activities with registered monitoring plan

Discussion:

During the verification, all relevant monitoring parameter have been verified with regard to the appropriateness of the verification method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. It is confirmed that the monitoring parameter has been measured / determined without material misstatements. The monitoring parameters involved in the project activity as per revised PDD/1/ are analysed in detail in the subsections below:

3.5.1. Data/Parameter, Unit: Qp,y, Litres per person per day

Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day

	Discussion and verification assessment
Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1 : By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Purpose of data	Baseline emissions
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Calibrated Buckets for measuring water
Measuring/Reading/Recording frequency	Biennially, 3 consecutive days of the monitoring exercise with exception of holidays
Data collection (from)	The Water Consumption Field Test results were collected for three

<i>data generation, aggregation, to recording, calculation and reporting)</i>	consecutive days in each household included in the sample frame. An average of this was then obtained. The figure was then divided by the average number of people in the household.
<i>Verified value</i>	BSF – 7 l/p/d HHFF – 7 l/p/d IHFF – 2.33 l/p/d
<i>Cross checks</i>	This has been cross checked by surveying the households during the verification remote audit. The household surveyed during the monitoring survey by project participant were interviewed by the verification team and it has been confirmed that the figures mentioned in the survey sheet/11/ and considered for emission reduction are appropriate. The sampling requirement of 90/30 confidence/precision was achieved by PP which was found to be acceptable.
<i>QA/QC procedures applied</i>	The enumerators were provided with calibrated buckets to ensure they took accurate measurements during the WCFT protocol.

3.5.2. Data/Parameter, Unit: Qp, rawboil,y, Litres per person per day

Quantity of raw water boiled in the project scenario p per person per day

	Discussion and verification assessment
Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1 : By 2030, achieve universal and equitable access to safe and affordable drinking water for all
<i>Purpose of data</i>	Project emissions
<i>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</i>	Calibrated Buckets for measuring water
<i>Measuring/Reading/Recording frequency</i>	Biennially
<i>Data collection (from data generation, aggregation, to recording, calculation and reporting)</i>	The amount of raw water boiled was obtained for the three consecutive days during the water consumption field test before the water was poured into the boiling pot. An average of this amount was then obtained and divided by the average number of people in the household. (There were no households boiling water in the project scenario)
<i>Verified value</i>	0
<i>Cross checks</i>	This has been cross checked by interviewing the households during the verification off-site remote assessment. The household surveyed during the monitoring survey by project participant were interviewed by the verification team and it has been confirmed that the figures mentioned in the survey sheet/11/ and considered for emission reduction are appropriate.

	The sampling requirement of 90/30 confidence/precision was achieved by PP which was found to be acceptable.
<i>QA/QC procedures applied</i>	The enumerators were trained how to accurately measure this parameter using calibrated buckets.

3.5.3. Data/Parameter, Unit: Qp, clean,boil,y Litres per person per day

Quantity of safe water boiled in the project scenario p per person per day

	Discussion and verification assessment
Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all
<i>Purpose of data</i>	Project emissions
<i>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</i>	Calibrated Buckets for measuring water
<i>Measuring/Reading/Recording frequency</i>	Biennially
<i>Data collection (from data generation, aggregation, to recording, calculation and reporting)</i>	The amount of filtered water boiled was obtained for the three consecutive days during the water consumption field test before the water was poured into the boiling pot. An average of this amount was then obtained and divided by the average number of people in the household and thereafter the number of people in the sample frame.
<i>Verified value</i>	0
<i>Cross checks</i>	This has been cross checked by interviewing the households during the verification off-site remote assessment. The household surveyed during the monitoring survey by project participant were interviewed by the verification team and it has been confirmed that the figures mentioned in the survey sheet/11/ and considered for emission reduction are appropriate. The sampling requirement of 90/30 confidence/precision was achieved by PP which was found to be acceptable.
<i>QA/QC procedures applied</i>	The enumerators were trained how to accurately measure this parameter using calibrated buckets.

3.5.4. Data/Parameter, Unit: Np,y, Person.days

Number of persons consuming water supplied by project scenario p through year y

	Discussion and verification assessment
Relevant SDG Indicator	SDG 3: Good health and well being Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
<i>Purpose of data</i>	Baseline emissions
<i>Monitoring equipment (type, accuracy class,</i>	No Equipment Used, Calculated from the results of Monitoring survey

<i>serial number, calibration frequency, date of last calibration, validity)</i>	
<i>Measuring/Reading/Recording frequency</i>	Biennial
<i>Data collection (from data generation, aggregation, to recording, calculation and reporting)</i>	Households were asked the number of people living in their household for that particular day in the three consecutive days during the water consumption field test. An average of this number was then obtained for each household and an average of total obtained. The figure was multiplied by 365 days in a year to obtain the figure.
<i>Verified value</i>	BSF – 2,043 HHFF – 1,662 IHFF – Calculated in ER sheet and was found to be consistent.
<i>Cross checks</i>	This has been cross checked by interviewing the households during the verification off-site remote assessment. The household surveyed during the monitoring survey by project participant were interviewed by the verification team and it has been confirmed that the figures mentioned in the survey sheet/11/ and considered for emission reduction are appropriate.
<i>QA/QC procedures applied</i>	NA

3.5.5. Data/Parameter, Unit: Up,y, Percentage

Usage rate in project scenario p during year y. This data will be used to account for households which discontinue use of the filters from the monitored sample frame and thereafter be extrapolated across the total sales record.

	Discussion and verification assessment
Relevant SDG Indicator	SDG 3: Good health and well being <i>Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.</i>
<i>Purpose of data</i>	Calculation of total emission reductions
<i>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</i>	No Equipment Used, Calculated from the results of survey
<i>Measuring/Reading/Recording frequency</i>	Annually
<i>Data collection (from data generation, aggregation, to recording, calculation and reporting)</i>	The usage parameter for each vintage was calculated by getting the fraction of users in the sample frame for that vintage and getting the percentage in relation to the total in the sample frame. Thereafter, the weighted average per vintage was obtained by extrapolating the usage in the sample per vintage into the entire population of the TSR for that particular vintage. Each of the usage rates for each vintage was then used for calculation of emission reduction. The PP has provided excel based calculations that demonstrate the calculation of the usage parameter.

Verified value	BSF 2020– 70.83% 2021– 70.83% HHFF 2020–92.64% 2021– 92.64% IHFF 2020– 90.55% 2021–90.55%
Cross checks	This has been cross checked by interviewing the households during the verification off-site remote assessment. The household surveyed during the monitoring survey by project participant were interviewed by the verification team and it has been confirmed that the figures mentioned in the survey sheet/11/ and considered for emission reduction are appropriate. A minimum of 30 surveys has been used to determine minimum required sample size as required by the methodology, which was found to be acceptable.
QA/QC procedures applied	The guidance questions in the usage survey clearly determined the operational and non-operational filters in the project scenario.

3.5.6. Data/Parameter, Unit: Quality of the treated water, %

Performance of the project technologies shall be based on percentage reduction of E.Coli examined through field tests in the project boundary.

	Discussion and verification assessment
Relevant SDG Indicator	SDG 6: Clean water and Sanitation Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Purpose of data	Sustainable development Monitoring; Methodological Requirement
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Field Laboratory Tests
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The water quality tests were conducted using 3M Petrifilm Plate instructions/16/ and the petrifilm plates photographs were cross-checked as well. Water samples were collected from raw water and water filtered using the project technologies to determine coliform levels in both water samples.
Verified value	BSF: 100% HHFF:98.6% IHFF: 100%
Cross checks	The water quality assessment was done during the remote surveys and included a qualitative criterion for Water Quality which covered the following aspects: • Reported incidence of water borne disease in child/members in last 30

	days • User satisfaction • Level of hygiene including but limited to Hand washing & Safe storage practices being followed. • Level of E.coli in filtered water. The water quality testing value from the last verification (2019/2020) was 99.29% for BSF, 100% for HHFF and 100% for IHFF which indicates a consistent trend on the quality of the water supplied by the project. The methodological requirement is that the 90/30 confidence/precision should be used to determine the minimum required sample size. This has been achieved as the water quality assessment was undertaken for all the end-users with functional water filters. This has been cross checked by interviewing randomly selected households during the verification off-site remote assessment.
QA/QC procedures applied	NA

3.5.7. Data/Parameter, Unit: Bb,y, Tonnes Quantity of wood fuel consumed in baseline scenario b during the year y in tons

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	Calculation of Baseline emissions
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	N/A
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The parameter is a function of the Cj factor, Npy, Wib,y , Qpy an Qp raw boil as shown in the equation below: $Bby = (1 - Cj) * Wib,y * Np,y * (Qpy + Qpraw,boil)$
Verified value	BSF: 4.6896 HHFF: 3.8150 IHFF: 0.00022
Cross checks	The same has been confirmed through the monitoring survey forms, monitoring survey conducted by the PP and through the interviews conducted with the households during the off-site remote assessment.
QA/QC procedures applied	The variables were based on accurate monitored data as well as data fixed ex-ante. Additionally, the formula used is derived from the GS approved methodology "Technologies and practices to Displace Decentralized Thermal Energy Consumption", version 01.

3.5.8. Data/Parameter, Unit: Number of filters sold

	Discussion and verification assessment
Relevant SDG Indicator/Safeguarding Principle	SDG 3: Good health and well being Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
Purpose of data	Calculation of emission reductions.
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	The total number of filters sold have been verified from the total sales records.
Measuring/Reading/Recording frequency	Annual
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The total number of filters sold have been verified from the total sales record.
Verified value	BSF:3,215 HHFF:2,212 IHFF: 192
Cross checks	The same was checked from the revised MR and was also confirmed during the off-site remote assessment through the TSR sheet /7.2/, interview and monitoring records.
QA/QC procedures applied	It was confirmed through the monitoring arrangements during the remote audit that the total sales records are continuously updated.

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3.5.9. Data/Parameter, Unit: Reduction in water borne diseases such as skin rash, diarrhoea, foot sores, parasites, eye problems and other water borne diseases, %

	Discussion and verification assessment
Relevant SDG Indicator	SDG 3: Good health and well being Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
Purpose of data	Gold Standard's Sustainable Development Monitoring
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Open ended questionnaires to ascertain real and perceived improvements in household health and reduction of water borne diseases.
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation,	Monitoring Survey

<i>aggregation, recording, calculation and reporting)</i>	
<i>Verified value</i>	BSF: 77% HHFF: 87% IHFF: 100% For BSF users, 26 people has experienced no change in incidence of waterborne disease since they started using their filter. With HHFF, 5 people reported getting a water borne disease. With IHFF, 0 person reported having a water borne disease.
<i>Cross checks</i>	Surveys were conducted remotely for all households with functional water filters. This has been achieved as the sustainable development assessment was undertaken for all the end-users with functional water filters. This has been cross checked from the Survey results/7.1/ of the surveyed household and found correct.
<i>QA/QC procedures applied</i>	The questionnaire is asked in an unbiased manner to ensure the respondents are not coerced into any answer by the interviewer

3.5.10. Data/Parameter, Unit: Air Quality, %

	Discussion and verification assessment
<i>Relevant SDG Indicator</i>	SDG 3: Good health and well being Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
<i>Purpose of data</i>	Gold Standard's Sustainable Development Monitoring
<i>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</i>	Monitoring Survey questionnaire
<i>Measuring/Reading/Recording frequency</i>	Annually
<i>Data collection (from data generation, aggregation, calculation and reporting)</i>	The number of end users with the perceived outcome e.g., reduced levels of smoke was divided by the total units in the sample frame and multiplied by 100 to get the percentage.
<i>Verified value</i>	BSF Reduced Smoke levels in the House: Yes = 90 No = 2% No Change = 8% Reduced Incidents of Coughing: Yes = 93% No = 0% No Change = 7% Reduced incidences of Itchy Eyes: Yes = 77% No = 0%

	No Change = 23%
Cross checks	The monitoring survey questions related to air quality were fashioned in an unbiased manner so as not to influence the feedback from the respondents in any way. Surveys were conducted remotely for all households with functional water filters. This has been achieved as the sustainable development assessment was undertaken for all the end-users with functional water filters. This has been cross checked from the Survey results/7.2/ of the surveyed household and found correct.
QA/QC procedures applied	The monitoring survey questions related to air quality were fashioned in an unbiased manner so as not to influence the feedback from the respondents in any way.

3.5.11. Data/Parameter, Unit: Air Quality, %

	Discussion and verification assessment
Relevant SDG Indicator	SDG 3: Good health and well being Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
Purpose of data	Gold Standard's Sustainable Development Monitoring
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Monitoring Survey questionnaire
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The number of end users with the perceived outcome e.g., reduced levels of smoke was divided by the total units in the sample frame and multiplied by 100 to get the percentage.
Verified value	HHFF Reduced Smoke levels in the House Yes = 92% No = 1% No Change = 7% Reduced Incidents of Coughing: Yes = 88% No = 1% No Change = 11% Reduced incidences of Itchy Eyes: Yes = 87% No = 1% No Change = 12%
Cross checks	The monitoring survey questions related to air quality were fashioned in an unbiased manner so as not to influence the feedback from the respondents in any way. Surveys were conducted remotely for all households with functional water filters. This has been achieved as the

	sustainable development assessment was undertaken for all the end-users with functional water filters. This has been cross checked from the Survey results/7.2/ of the surveyed household and found correct.
<i>QA/QC applied</i>	<i>procedures</i> The monitoring survey questions related to air quality were fashioned in an unbiased manner so as not to influence the feedback from the respondents in any way.

3.5.12. Data/Parameter, Unit: Air Quality, %

	Discussion and verification assessment
Relevant SDG Indicator	SDG 3: Good health and well being Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.
<i>Purpose of data</i>	Gold Standard's Sustainable Development Monitoring
<i>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</i>	Monitoring Survey questionnaire
<i>Measuring/Reading/Recording frequency</i>	Annually
<i>Data collection (from data generation, aggregation, to recording, calculation and reporting)</i>	The number of end users with the perceived outcome e.g., reduced levels of smoke was divided by the total units in the sample frame and multiplied by 100 to get the percentage.
<i>Verified value</i>	IHFF Reduced Smoke levels in the House: Yes = 76% No = 0% No Change = 24% Reduced Incidents of Coughing: Yes = 76% No = 0% No Change = 24% Reduced incidences of Itchy Eyes: Yes = 79% No = 0% No Change = 21%
<i>Cross checks</i>	This has been cross checked from the Survey results/7.2/ of the surveyed household and found correct.
<i>QA/QC applied</i>	<i>procedures</i> The monitoring survey questions related to air quality were fashioned in an unbiased manner so as not to influence the feedback from the respondents in any way.

3.5.13. Data/Parameter, Unit: Number of people attending training/ workshops on maintenance of the water filters, water and sanitation management., NA

	Discussion and verification assessment
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Relevant SDG Indicator	SDG 6: Clean water and Sanitation Target 6b: Support and strengthen the participation of local communities in improving water and sanitation management
Purpose of data	Gold Standard's Sustainable Development Monitoring
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Training records
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The data has been sourced from the training records.
Verified value	4 trainings were held as summarised below: - Washiriki Training, 25-27/02/2020, 30 attendees (20 women, 10 men) - Community WASH promoters, 09/10/2020, 25 attendees (13 women, 12 men) - Community WASH Promoters Meeting, 03/12/2020, 15 attendees (12 women, 3 men) - Community WASH Promoters Meeting, 14/01/2021, 15 attendees (12 women, 3 men)
Cross checks	The training records/details /14/ were cross- checked and was found acceptable.
QA/QC procedures applied	Accurate and up to date records on trainings held by the project are kept by the project participant.

3.5.14. Data/Parameter, Unit: Number of people employed by the project, NA

	Discussion and verification assessment
Relevant SDG Indicator	SDG 8: Decent Work and Economic Growth Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
Purpose of data	Gold Standard's Sustainable Development Monitoring
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Employment Records/14/
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The data has been sourced from the employment records /14/.

Verified value	52 people were employed by the project. These included 14 permanent employees at Aqua Clara, 22 people who were employed in the filter distribution program and 16 as enumerators for the monitoring survey exercise. Both women and youth have been employed in this project as evidenced in the employment record and monitoring survey summary. For the filter installers, 4 were men and 18 women. Out of the 14 permanent ACI employees, 8 were men while 6 were women, 9 people in total are youths, defined in Kenya as persons under the age of 35 years. The specific wages for the staff was verified through the records available at the PP's office during the off-site remote audit assessment. Further the staff people were also interviewed on the wages to confirm on the records submitted for verification during the off-site remote audit assessment. Hence equal pay for work of equal value made to both men and women staffs was verified during the off-site remote audit assessment.
Cross checks	The employment details were cross- checked and was found acceptable.
QA/QC procedures applied	Employment Records are kept electronically and updated frequently to ensure they are up to date.

3.5.15. Data/Parameter, Unit: Employment wages of people employed by the project, NA

	Discussion and verification assessment
Relevant SDG Indicator	SDG 8: Decent Work and Economic Growth Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
Purpose of data	Gold Standard's Sustainable Development Monitoring
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Employment Records Sales per sales agent Enumerator's employment record
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The data has been sourced from the employment and wages records
Verified value	22 people were employed in the filter distribution program. Each person was paid Ksh. 500 for each filter sold. The highest record of filters sold by the employees is 39 filters where the employee was paid Ksh. 19,500. While the lowest had sold receiving 3 filter and got Ksh. 1,500. There are also 14 permanent employees working with the project. The employment records have been submitted separately. Total income generated by the employees from filter distribution is Ksh. 222,500 while that from the monitoring exercise is Kshs.88,900. The employment and wages records have been submitted to the assessment team, which was checked and found appropriate. Equal pay was made to both men and women depending on the number of filters

	sold where a payment of Ksh. 500 was made for every filter. The same also discussed with both men and women and hence confirmed during the off-site remote audit assessment.
<i>Cross checks</i>	The employment and wages records /14/ were cross- checked and was found acceptable.
<i>QA/QC procedures applied</i>	Employment Records are kept electronically and updated frequently to ensure they are up to date.

3.5.16. Data/Parameter, Unit: Number of people attending training/ workshops on filter installation and maintenance, Number of people

	Discussion and verification assessment
Relevant SDG Indicator	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Target: 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
<i>Purpose of data</i>	Gold Standard's Sustainable Development Monitoring
<i>Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)</i>	Training records
<i>Measuring/Reading/Recording frequency</i>	Annually
<i>Data collection (from data generation, aggregation, to recording, calculation and reporting)</i>	The data has been sourced from the training records.
<i>Verified value</i>	85 people were trained through the trainings.
<i>Cross checks</i>	The training details were confirmed during the off-site remote audit assessment through interviews and training records /14/.
<i>QA/QC procedures applied</i>	Accurate and up to date records on trainings held by the project are kept by the project participant.

3.5.17. Data/Parameter, Unit: Number of workshops, seminars organized, and training-related opportunities held, NA

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts Target 13.1: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
<i>Purpose of data</i>	Gold Standard's Sustainable Development Monitoring
<i>Monitoring equipment (type, accuracy class,</i>	Training records

serial number, calibration frequency, date of last calibration, validity)	
Measuring/Reading/Recording frequency	Annually
Data collection (from data generation, aggregation, to recording, calculation and reporting)	The data has been sourced from the training records.
Verified value	During the monitoring period, 4 such trainings were conducted. The trainings were on filter installation and maintenance, WASH and Community Development Entrepreneurs (CDE) meeting. During these trainings, the people were also trained about the filters.
Cross checks	The training details were confirmed through the off-site remote audit assessment through interviews and training manuals.
QA/QC procedures applied	Accurate and up to date records on trainings held by the project are kept by the project participant.

3.5.18. Data/Parameter, Unit: LEp,y, t CO₂e/year

	Discussion and verification assessment
Relevant SDG Indicator/Safeguarding Principle	SDG 13: Climate Action Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Purpose of data	Calculation of emission reductions.
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	In accordance with the methodology an assessment of all project scenarios which might result in leakage emissions has been conducted. This demonstrated, there are no potential leakage emission sources arising.
Measuring/Reading/Recording frequency	Biennially
Data collection (from data generation, aggregation, to recording, calculation and reporting)	Literature Review
Verified value	0
Cross checks	There are no perceived monitoring requirements for leakage emissions for this project. The same has been cross checked from the revised PDD/1/ also.
QA/QC procedures applied	There are no perceived leakage risks for this project as explained in section D.2 of the Monitoring report.

Findings:

No findings raised.

Opinion:

The adequacy and compliance of the monitoring plan in the Monitoring report/4/ was found as per the requirements laid by the GS4GG requirements, GS transition annex, monitoring methodology/5/ and the registered PDD/1/. The information flow (from data generation, aggregation, to recording, calculation and reporting) is already included under respective parameter above. The verification team has verified all the data and collected evidence as per the required monitoring frequency and found to be correct and appropriate meeting the GS4GG requirements, requirements of applied methodology and registered PDD. The sustainability parameters were also reviewed and the assessment team is of the opinion that the project elevates the living standard of the rural population and aids in better health by reducing the exposure to water borne diseases.

3.6 Compliance with the calibration frequency requirements for measuring instruments

The monitoring for the project activity is done through the surveys conducted for the sample population. The data from the survey sheets is transferred to the excel sheet which is further used for calculation of emission reductions. Therefore, there are no instruments involved in monitoring.

3.7 Data not monitored (ex-ante or external parameters)

3.7.1. Data/Parameter, Unit: Wb,y, Tonnes/litre

Quantity of fuel in tons required to treat 1 litre of water using technologies representative of baseline scenario b

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	Calculation of Baseline Emissions
Verified value	Households – 0.0004 Institutions/commercial facilities – 0.0004
Source of value	Baseline water Boiling test. The value provided above was derived from water boiling tests as recommended by the methodology.
Justification	During baseline surveys, values obtained were 0.00054960 for households and 0.00054458 for institutions. These values have now been capped to 0.0004tons as per GS guidelines.

3.7.2. Data/Parameter, Unit: EF_{b,fuel,CO2}, tCO₂/TJ

CO₂ emission factor of the wood fuel

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	CO ₂ emission factor of the wood fuel
Verified value	112
Source of value	IPCC Default emission factor
Justification	The value is conservative as IPCC values /21/ are prescribed by the applied Methodology/5/.

3.7.3. Data/Parameter, Unit: NCV_b, TJ/ton

Net calorific value of wood fuel used in the baseline

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	To determine the calorific value of wood fuel used in the baseline
Verified value	0.015
Source of value	IPCC default value
Justification	The value is conservative as IPCC values/21/ are prescribed by the applied methodology/5/.

3.7.4. Data/Parameter, Unit: $EF_{b,fuel,CH_4}$, tCH₄/TJ

CH₄ emission factor of the wood fuel

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	Calculation of baseline missions
Verified value	0.03
Source of value	IPCC Default value
Justification	The value is conservative as IPCC values/21/ are prescribed by the applied methodology/5/.

3.7.5. Data/Parameter, Unit: $EF_{b,fuel,N_2O}$, t N₂O /TJ

N₂O emission factor of the wood fuel

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
<i>Purpose of data</i>	Calculation of baseline missions
<i>Verified value</i>	0.004
<i>Source of value</i>	IPCC Default value
<i>Justification</i>	The value is conservative as IPCC values/21/ are prescribed by the applied methodology/5/.

3.7.6. Data/Parameter, Unit: GWP, Fraction

Global Warming Potential of CH₄

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	Calculation of baseline missions

Verified value	25 (value used before 01/01/2021) 28 (Value used after 01/01/2021)
Source of value	IPCC Third Assessment Report: Climate Change 2001 and IPCC fifth Assessment Report (AR5)/21/
Justification	The PP has used the updated value for 2021. This is in accordance with Applicability of Global warming potential for Gold Standard for the Global Goals Projects – Gold Standard for the Global Goals dated 03/06/2021.

3.7.7. Data/Parameter, Unit: GWP, Fraction

Global Warming Potential of N₂O

	Discussion and verification assessment
Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Purpose of data	Calculation of baseline missions
Verified value	298 (Value used before 01/01/2021) 265 (Value used after 01/01/2021)
Source of value	IPCC Third Assessment Report: Climate Change 2001 and IPCC fifth Assessment Report (AR5)/21/
Justification	The PP has used the updated value for 2021. This is in accordance with Applicability of Global warming potential for Gold Standard for the Global Goals Projects – Gold Standard for the Global Goals dated 03/06/2021.

3.7.8. Data/Parameter, Unit: C_j, %

Expressed as a percentage, this is the portion of users of the project technology j who in the baseline were already consuming safe water without boiling it

	Discussion and verification assessment
Relevant SDG Indicator	SDG 6: Clean Water and Sanitation Target 6.1 : By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Purpose of data	Calculation of baseline missions
Verified value	18% - Households 76% - Institutions and commercial facilities
Source of value	Baseline Surveys
Justification	The value is consistent with Baseline Testing Survey (July 2015) Summary /19/

Findings: CAR 04, CL 02 and CL 03 was raised during the verification process which was subsequently closed. This is discussed in detail in section 7 of this report.

Opinion:

The default values applied were found to be consistent with the revised PDD and the source.

3.8 Assessment of Data & calculation of GHG Emission Reductions

Baseline emissions

As described in Gold Standard methodology, the baseline scenario wood fuel consumption is back calculated by multiplying the safe water consumption of end users observed in the project scenario by the amount of fuel required to boil a specific quantity of water. The equation below therefore draws on this premise to calculate baseline emissions.

$$BE_{b,y} = B_{b,y} * ((f_{NRB,b,y} * EF_{b,fuel, CO2}) + EF_{b,fuel, nonCO2}) * NCV_{b, fuel}$$

Where

$$B_{b,y} = (1 - C_j) * N_{j,y} * W_{i,y} * (Q_{j,y} + Q_{j,rawboil,y})$$

The baseline emissions per filter has been calculated for each of the filter and checked through the ER sheet (GS 1078- Combined ER and MSS 20-21 tab ER calculation- BSF, HHFF, IHFF)) respectively and found reliable and appropriate .

Combined Summary of Baseline emissions in the monitoring period by both BSF, HHFF and IHFF

Period	BSF Baseline Emissions (tCO2e)	Total	HHFF Baseline Emissions per filter /year (tCO2e)	IHFF total Baseline Emission Reduction (tCO2e)	Combined Totals
19/02/2020- 31/12/2020	18,985		11,471	998	31,454
01/01/2021- 18/02/2021	2,333		1,676	169	4,178
Total	21,299		13,147	1,167	35,613

Project emissions

Project Emissions are calculated as follows:

$$PE_{p,y} = B_{p,y} * ((f_{NRB,p,y} * EF_{p,fuel, CO2}) + EF_{p,fuel, nonCO2}) * NCV_{p, fuel}$$

$$B_{p,y} = (1 - C_j) * N_{p,y} * W_{b,y} * (Q_{p,rawboil,y} + Q_{p,leanboil,y})$$

Combined Summary of Project emissions in the monitoring period by both BSF, HHFF and IHFF

Period	BSF Project Emissions (tCO ₂ e)	Total	HHFF project Emissions per filter /year (tCO ₂ e)	IHFF project Emission Reduction (tCO ₂ e)	Combined Totals
19/02/2020-31/12/2020	0		0	0	0
01/01/2021-18/02/2021	0		0	0	0
Total	0		0	0	0

Leakage:

PP has provided the assessment for leakage, details reasoning provided by PP with the evidences provided therein. Verification team reviewed the leakage assessment provided by PP and reviewed the supporting evidences and concluded that there are no leakage associated with the project activity.

Emission Reductions:

The overall GHG reductions are calculated as follows:

The overall GHG reductions are calculated as follows:

$$ER_y = (\sum BE_{b,y} - \sum PE_{p,y}) * U_{p,y} - \sum LE_{p,y} \quad (13)$$

Where:

$U_{p,y}$ Cumulative usage rate for technologies in project scenario p during year y, based on cumulative installation rate and drop off rate.

BSF:

Emission Reductions 2020 per filter

$(7.405 - 0) * 70.83\% * 100\% - 0 = 5.2453 \text{ tCO}_2\text{e}$ (This figure was then divided by 365 days in a year to get the emission reductions per day i.e., 0.01433 tCO₂e).

Emission Reductions 2021 per filter

$(7.3820 - 0) * 70.83\% * 100\% - 0 = 5.22880 \text{ tCO}_2\text{e}$ (This figure was then divided by 365 days in a year to get the emission reductions per day i.e., 0.01433 tCO₂e).

HHFF

Emission Reductions 2020 per filter

$(6.024 - 0) \times 92.64\% \times 98.60\% - 0 = 5.5026 \text{ tCO}_2\text{e}$ (This figure was then divided by 365 days in a year to get the emission reductions per day i.e. 0.01503).

Emission Reductions 2021 per filter

$(6.005 - 0) \times 92.64\% \times 98.60\% - 0 = 5.4853 \text{ tCO}_2\text{e}$ (This figure was then divided by 365 days in a year to get the emission reductions per day i.e. 0.01502).

IHFF

Emission Reductions 2020 per filter

The detailed calculations are available in the ERs sheet (IHFF MSS and ERs excel sheet) submitted by the PP which is found correct.

Emission Reductions 2021 per filter

The detailed calculations are available in the ERs sheet (IHFF MSS and ERs excel sheet) submitted by the PP which is found correct.

Combined Summary of Emission Reductions accrued in the monitoring period by both BSF, HHFF and IHFF

Period	BSF total Emission Reduction (tCO ₂ e)	HHFF total Emission Reduction (tCO ₂ e)	IHFF total Emission Reduction (tCO ₂ e)	Combined Totals
19/02/2020-31/12/2020	13,385	10,567	924	25,853
01/01/2021-18/02/2021	1,912	1,510	132	3,693
Total	15,297	12,077	1,056	28,429

Findings:

CAR 5, CAR 6 was raised during the course of verification which was subsequently successfully closed. This is discussed in detail in section 7 of this report.

Opinion:

The verification team confirms that

- The complete data set for the monitoring parameters was available as mentioned in the monitoring plan in the revised PDD for the duration of 19/02/2020– 18/02/2021.
- The cross checks were undertaken for all the parameters indicated in the respective sections and were found complying with the requirements of the monitoring plan of the revised PDD;
- Appropriate methods and formulae for calculating baseline emission, project emissions and leakage have been followed;
- The claimed emission reductions are free from material errors, omissions or misstatements, with a reasonable level of assurance.

3.9 Quality of Evidence to Determine Emission Reductions

The evidences (Documents/interview/remote audit) referred for verification of individual monitoring parameter and fixed parameters are defined section 3.5 and section 3.7 respectively. It can be confirmed by the assessment team that the reported emission reductions have been conservatively calculated. A list of referred documents for verification is also included in section 6 of this report.

3.10 Management System and Quality Assurance

Aqua Clara International has developed GHG emission reduction management system for management of the project. The procedures cover the quality assurance of the monitoring systems for the project activities. The monitoring is in the purview of The Carbon Asset Development, Project Manager, ClimateCare Limited.

Out of the total installed filters, the verification team has chosen a sample size of 19 filters. The household sampled in the survey during remote audit, were cross verified with the sales record as well as with monitoring survey record to confirm the correctness of the data gathered at the time of survey. The result of verification team's observation based on the chosen sample is found consistent with the sales record. No discrepancy was found during on remote audit. Thus, according to the result of verification team's random sampling as a part of the remote audit, the water filters were found installed and operating as per PP's sales records.

3.11. Status Of Implementation Of Continuous Input/ Grievance Mechanism & Feedback Received

There is a continuous input/grievance mechanism in place for beneficiaries to be able to give feedback on the project. It was discussed during the remote audit interview, that the Logbook/Expression Book/database is kept in the Aqua Clara International office located at Rigoma (Kisii), which is checked on a regular basis by the field staff.

As confirmed during the remote interview, the grievances/comments of the stakeholders are also invited through the means of telephone to office and also with CDE who installed filter. where a contact person (Josephine Mokeira Orare, Monitoring and Evaluation Officer) has been assigned for the same and emails to the project developer (orarejosephine@yahoo.com) and on contact nos. +254716406687, +254724784897.

During the current monitoring period grievances were recorded using the prescribed format. In this period, a total of 90 grievances were recorded, and all of them were adequately resolved. These issues revolved around the operation and maintenance of the filters and the necessary support was given. There were no other grievances raised from other platforms apart from those included in the logbook.

Grievances record/database/24/ shows that stakeholders have also been provided with the Gold Standard contact which they can use to reach the standard in case of any issues or comments. The email provided for this purpose is info@goldstandard.org.

Further, the grievances record/database/24/ and remote audit interview confirms that-

There were no grievances raised from previous monitoring that required further follow-up.

The project does not have any legal contests or disputes.

The households also confirmed that the field staffs are based close-by the project area and visit regularly so that face-to-face feedback is also possible.

4. RECOMMEDATIONS / FORWARD ACTION REQUEST

This is the 7th periodic verification. There is no FAR raised during this monitoring period.

5. VERIFICATION & CERTIFICATION STATEMENT

KBS Certification Services Pvt. Ltd. has been contracted by “Aqua Clara International” to undertake independent verification and certification for the greenhouse gas (GHG) emission reductions reported from the “Aqua Clara Water Filtration Program in Kenya”, GS Id. 1078 for the monitoring period 19/02/2020 – 18/02/2021 in the Monitoring Report Version 01 (first version) dated 17/06/2021.

The verification is based on the registered PDD, GS Passport, transition annex and the monitoring report for this project and GS4GG requirements. Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakech accord, as well as those defined by the Gold Standard Board.

The management of the “Aqua Clara International” is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project final Monitoring Report Version 04 dated 20/09/2021. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the “Aqua Clara International”. The development and maintenance of records and reporting procedures are in accordance with the final Monitoring Report Version 04 dated 20/09/2021.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions and SDGs from the project for the monitoring period 19/02/2020 – 18/02/2021 based on the reported emission reductions in the final Monitoring Report Version 04 dated 20/09/2021 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

KBS confirms the following;

Reporting period: From 19/02/2020 – 18/02/2021 (Including both the days)

Verified emission in the above reporting period (for SDG 13):

Period	BSF	HHFF	IHFF
From 19/02/2020-31/12/2020	13,385	10,567	924
From 01/01/2021-18/02/2021	1,912	1,510	132
Total Emission Reduction (tCO₂e)	28,429		

For other SDGs:

SDG	SDG Impact	BSF	HHFF	IHFF
SDG 3	Good Health and well being	- Usage:70.83% - Np,y: 2,043 - Reduced incidence in water borne diseases: 77%	- Usage: 92.64% - Np,y: 1,662 - Reduced incidence of water borne diseases: 87%	- Usage: 90.55% - Np,y: determined for each institution in ER sheet - Reduced incidence of water borne diseases:

		- Reduced smoke levels: 90% - Reduced incidences of coughing: 93% - Reduced incidences of itchy eyes: 77%	- Reduced smoke levels: 92% - Reduced incidences of coughing: 88% - Reduced incidences of itchy eyes: 87%	100% - Reduced smoke levels: 76% - Reduced incidences of coughing: 76% - Reduced incidences of itchy eyes: 79%
SDG 6	Clean water and sanitation	- Quality of treated water: 100% - Number of people attending workshops, seminars or trainings on water, hygiene, and sanitation management): 85	- Quality of treated water: 98.60% - Number of people attending workshops, seminars or trainings on water, hygiene, and sanitation management: 85	- Quality of treated water: 100% - Number of people attending workshops, seminars or trainings on water, hygiene and sanitation management: 85
SDG 8	Decent work and economic growth	- Number of persons employed by the project: 52 - Change in number of jobs and positions for women or change in income and asset distributions by region, ethnicity, religion, and socioeconomic groups: 18 women and 26 youths - Employment wages of people employed by the project: 22 people were employed in	- Number of persons employed by the project: 52 - Change in number of jobs and positions for women or change in income and asset distributions by region, ethnicity, religion, and socioeconomic groups: 18 women and 26 youths employed. - Employment wages of people employed by the project: 22 people were employed in the	- Number of persons employed by the project: 52 - Change in number of jobs and positions for women or change in income and asset distributions by region, ethnicity, religion, and socioeconomic groups: 18 women and 26 youths employed. - Employment wages of people employed by the project: 22 people were employed in the filter distribution program. Total

		the filter distribution program. Total income paid to the employees is Ksh. 222,500	filter distribution program. Total income paid to the employees is Ksh. 222,500	income paid to the employees is Kshs. 222,500
SDG 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation Target	Number of people trained on filters installation and maintenance: 85	85 people were trained on filter installation including 57 women and 28 men	85 people were trained on filter installation including 57 women and 28 men

Location: Faridabad

Date: 24/09/2021



Kaushal Goyal

Managing Director

KBS Certification Services Pvt. Ltd.

6. REFERENCES

S.No.	Name of the document
/1/	Revised Project Design Document (Version 24, dated 25/05/2016)
/2/	Design Change Assessment Report issued by Carbon Check India Private Limited (Revision no. 7, dated 31/05/2016)
/3/	Revised Gold standard passport (Version: 10, dated: 4/4/2016) Transition Annex approved by the Gold Standard
/4/	Monitoring report version 01, dated 17/06/2021
	Monitoring report version 04, dated 24/09/2021 (final)
/5/	GS methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (Version 1.0; Dated 11/04/2011)
/6/	Emission Reduction (ER) Sheets
	/6.1/ ER Sheets corresponding to version 01
	/6.2/ ER Sheets corresponding to final version
/7/	Worksheets
	/7.1/ Monitoring Survey Excel sheet records
	/7.2/ TSR and sample frame spreadsheets
/8/	Gold Standard for Global Goals requirements
/9/	CDM Validation and Verification Standard version 02.0
/10/	Aqua Clara International: total sales record for the filters sold till the end of this monitoring period i.e. 18/02/2021
/11/	ACF: Monitoring Survey Template and Filled forms
/12/	VER right transfer sheets
/13/	Sampling and surveys for CDM project activities and programme of activities version 09.0
/14/	Training issued by Aqua Clara International Employment/Income Records including the wages provided to the staff
/15/	Laboratory test results for the water samples collected from the surveyed households
/16/	3M Petri film Instructions manual
/17/	Technical specification of the water filters
/18/	Annual report/Previous monitoring report dated 25/02/2021
/19/	Baseline Testing Survey Summary pertaining to seventh monitoring period.
/20/	Default values of fraction of non-renewable biomass http://cdm.unfccc.int/DNA/fNRB/index.html
/21/	IPCC Third Assessment Report: Climate Change 2001.
	IPCC Fifth Assessment Report: (AR5)
/22/	Gold Standard Registry project webpage:
	https://registry.goldstandard.org/projects/details/59
/23/	Gold Standard Foundation: http://www.goldstandard.org
/24/	Grievance logbook records/database for 2020-2021

7. FINDINGS DOCUMENT

Summary of findings	CAR	CL	FAR From Previous Verification/Validation/performance review
	06	03	06

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

Date	Type & Number	Raised by	Reference
12/07/2021	FAR 01	Assessment team	3.1
Non conformities raised			
Usage Survey: As during this monitoring period monitoring is done as per GS approved deviation for the subsequent verification audit, the VVB shall ensure that atleast some of the samples selected for the on-site visit include those samples that have been remotely monitored by the PD.			
Project Participant's response		Date: 13/07/2021	
Due to the ongoing covid and restrictions on travelling. DOE audit was still done remotely and hence the PP did not include those households that underwent remote audit by the VVB.			
Documentation Provided as Evidence by Project Participant			
-			
Information Verified by Team Leader		Date of review: 13/07/2021	
-			
Reasoning for not acceptance or close out			
The restrictions due to COVID 19 pandemic has been extended due to which the VVB has conducted remote audit under current monitoring period as well. Hence, the FAR is open for next subsequent verification.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Open

Date	Type & Number	Raised by	Reference
12/07/2021	FAR 02	Assessment team	-
Non conformities raised			
The PP shall monitor the times of water filtration and amount of filled water per day to cross-check with the total water demand from households.			
Project Participant's response		Date: 13/07/2021	
Water consumption field test (WCFT) was done which showed that households filter water between 2-3 times per day depending on their needs. For BSF users, the average volume of water required is 7.78l/p/d, which has been capped at 7l/p/d as per WHO guidelines. On the other had the average number of persons per day is 5.5, hence total volume of water required per day is (7.7*5.5=42.35). The capacity of BSF is about 20 litres with households having storage containers to store filtered water, which enables them to filter more than 20 litres per day. BSF fact sheet has been provided which shows that the filter can filter up to 60 litres per day.			
HHFF users filter between once to thrice per day. Its capacity ranges from 10l-15 litres. The average number of persons per household using HHFF is 4.5, and average water consumption is 8.6l/p/d. Therefore, the average quantity of water needed is 38.7l/p/d. Households also have storage containers to store the filtered water to meet their needs. HHFF fact sheet has ben provided which shows the filter can produce between 100-400 litres of water per day.			
Documentation Provided as Evidence by Project Participant			
BSF and HHFF Fact sheets			
Information Verified by Team Leader		Date of review: 13/07/2021	
BSF and HHFF Fact sheets			
Reasoning for not acceptance or close out			

The verification confirmed through the remote audit interviews and the fact sheets provided by PP that water field consumption test was conducted for a 3-day period for each household with functional water filters. The WCFT exercise is conducted biennially but it was not conducted last verification due to Covid-19 pandemic. The PP limited the water measured to the water used for cooking, personal hygiene (washing hands) and drinking only as per the Gold Standard requirements. Therefore, through this method the total water demand from households was monitored. Hence, the FAR is closed.

Date of acceptance or non- acceptance	Date: 13/07/2021	Status: Closed
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Date	Type & Number	Raised by	Reference
12/07/2021	FAR 03	Assessment team	-
Non conformities raised			
The PP shall submit the phone questionnaires and shall not ask about the operation status of the filter prior to usage survey site visit to avoid the bias of not visiting the non-users. The pre-survey result shall also be submitted.			
Project Participant's response		Date: 13/07/2021	
Pre-visit surveys were conducted in advance to prepare for the main monitoring survey exercise. Phone calls were made to households and institutions by the project implementer. Additionally, physical visits were done to supplement the phone call exercise where the project implementer felt they would be more effective. The results submitted are for the pre-visit survey done via phone and the sample questionnaire used to conduct the surveys.			
Documentation Provided as Evidence by Project Participant			
<i>Pre-visit survey summary</i>			
Information Verified by Team Leader		Date of review: 13/07/2021	
<i>Pre-visit survey summary</i>			
Reasoning for not acceptance or close out			
The verification team reviewed the pre-visit responses and the survey was conducted via phone calls. It was observed that no questions related to operation status was asked prior to usage survey. Therefore, it was found to be acceptable. Hence, the FAR is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	FAR 04	Assessment team	-
Non conformities raised			
The PP shall monitor the average number of filters in the households and discount in the ER calculation if the households use more than one unit. The ER of MP6 must be recalculated based on the result of average number of filters and the over-issued amount must be deducted in MP7 issuance if any.			
Project Participant's response		Date: 13/07/2021	
The average number of filters per household were determined during this monitoring survey where households being interviewed were asked how many filters they had. No households interviewed with HHFF reported to having more than one filter. For BSF users, only 2 households responded that they had more than 1 filter, which translates to 0.64% of the households in the entire population with more than 1 filter. Since each household is supposed to have just 1 filter, this further translates to about 20 additional filters. Emission reductions have been calculated to account for the extra filters and deducted from this monitoring period. The same factor has been applied to the previous monitoring period (vintage 2019/2020), and the over-issued credits deducted from the current period			
Documentation Provided as Evidence by Project Participant			
GS 1078 Combined MSS and ERs calculations sheet			
Information Verified by Team Leader		Date of review: 13/07/2021	
GS 1078 Combined MSS and ERs calculations sheet			
Reasoning for not acceptance or close out			

The verification team cross-checked the ER sheet and confirms that the ERs have been deducted due to the presence of more than 1 filter in few households. Hence, the FAR is closed.

Date of acceptance or non- acceptance	Date: 13/07/2021	Status: Closed
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Date	Type & Number	Raised by	Reference
12/07/2021	FAR 05	Assessment team	-
Non conformities raised			
Project Developer shall carry out a WCFT per the approved monitoring plan within six months of end of the interim measure validity date or earlier, where possible.			
Project Participant's response		Date: 13/07/2021	
WCFT was done and results recorded and submitted to the GS as a support document (GS 1078 Combined MSS and ERs calculations sheet). BSF had a Qp.y of 7l/p/d (after capping as per WHO guidelines), HHFF had a Qp.y of 7l/p/d (after capping as per WHO guidelines) and IHFF had a Qp.y of 3.43l/p/d.			
Documentation Provided as Evidence by Project Participant			
GS 1078 Combined MSS and ERs calculations sheet			
Information Verified by Team Leader		Date of review: 13/07/2021	
GS 1078 Combined MSS and ERs calculations sheet			
Reasoning for not acceptance or close out			
The verification confirmed through the remote audit interviews and the fact sheets provided by PP that water field consumption test was conducted for a 3-day period for each household with functional water filters. The PP limited the water measured to the water used for cooking, personal hygiene (washing hands) and drinking only as per the Gold Standard requirements. Hence, the FAR is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	FAR 06	Assessment team	-
Non conformities raised			
Project Developer shall carry out a Water Quality Test as per the approved monitoring plan within three months of end of the interim measure validity date or earlier, where possible.			
Project Participant's response		Date: 13/07/2021	

PP included both qualitative and quantitative questions to determine the water quality. The summary is under water quality analysis tab for BSF, HHFF and IHFF) as well as on the MR section B.1.1.

Water quality results were as follows;

BSF:

Incidences of water borne diseases- 100% absent

Level of satisfaction – 99% highly satisfied and 1% modelately satisfied

Hygiene practices – 100% practice

Presence/ absence of E.coli- 100% abscent

Hence 100% usage interms of water quality

HHFF

Incidences of water borne diseases- 100% absent

Level of satisfaction – 99% highly satisfied and 1% modelately satisfied

Hygiene practices – 100% practice

Presence/ absence of E.coli- 99% abscent 1% present

Hence 98.6% usage interms of water quality

IHFF

Incidences of water borne diseases- 100% absent

Level of satisfaction – 100% highly satisfied and 1% modelately satisfied

Hygiene practices – 100% practice

Presence/ absence of E.coli- 100% abscent

Hence 100% usage interms of water quality

Documentation Provided as Evidence by Project Participant

GS 1078 Combined MSS and ERs calcuations sheet

Information Verified by Team Leader

Date of review: 13/07/2021

GS 1078 Combined MSS and ERs calcuations sheet

Reasoning for not acceptance or close out

The verification confirmed through the remote audit interviews and the water quality test results provided by PP that water quality test was conducted during the current MP as per the approved monitoring plan. Hence, the FAR is closed.

Date of acceptance or non- acceptance

Date: 13/07/2021

Status: Closed

Table 2. CAR from this verification

Date	Type & Number	Raised by	Reference
12/07/2021	CAR 01	Assessment team	3.2
Non conformities raised			

- Under Key project information of the submitted GS MR, PP shall remove the table related to programme of activity since it is a project activity. - Under Key project information of the submitted GS MR, the monitoring period number is incorrect. It shall be 7 instead of 9. - Under table 1 'Sustainable development contributions achieved' of the GS MR, the emission reductions achieved and number of filters sold during the current monitoring period for BSF, HHFF and IHFF is inconsistent with the ER sheet and other sections of the GS MR. - Under table 1 'Sustainable development contributions achieved' of the GS MR, the usage rate for HHFF, perceived change in air quality for BSF, HHFF and IHFF and reduction in water borne disease for BSF and HHFF is incorrect and was found to be inconsistent with the ER sheet. - Under table 1 'Sustainable development contributions achieved' of the GS MR, the SDG Impact 'No. Of people trained in water filtration technology' shall be under SDG 9 instead of SDG 13. - Under table 2 'product vintages' of the GS MR, the vintage year mentioned is incorrect for BSF, HHFF and IHFF. - Under section A.1 of the submitted GS MR, the value of ERs achieved is inconsistent with the ER sheet. - Under section A.4 of the submitted GS MR, the start date of monitoring period is incorrect.		
Project Participant's response		Date: 13/07/2021
- The table related to programme of activity has been removed. - PP indicated that number since this is the second last verification period. During the very first verification, PP registered this project retroactively and thought it might make more sense to indicate 9 instead of 7. GS is to further advise on this. - Section amended with the correct figures. - Section amended with the correct numbers. - Number of people trained has been moved to SDG 9. - Vintage year changed to 2020. - Ers amended. - Start date amended to reflect the correct date.		
Documentation Provided as Evidence by Project Participant		
<i>Revised MR</i>		
Information Verified by Team Leader		Date of review: 13/07/2021
<i>Revised MR</i>		
Reasoning for not acceptance or close out		
- The table has been removed by PP in the revised MR. Hence, the finding is closed. - The monitoring period number shall be consistent with previous GS MR which states 6th MP. Therefore, this shall be 7th. Hence, the finding is open. - The corrections have been done in the revised MR and was found to be consistent with the ER sheet. Hence, the finding is closed. - The corrections have been done in the revised MR and was found to be consistent with the ER sheet. Hence, the finding is closed. - The corrections have been done in the revised MR. Hence, the finding is closed. - The vintage year for end date is incorrect in the MR. Hence, the finding is open. - The correction has been done in the revised MR and was found to be consistent with the ER sheet. Hence, the finding is closed. - The correction has been done in the revised MR. Hence, the finding is closed.		
Date of acceptance or non- acceptance	Date: 13/07/2021	Status: Open
Project Participant's response		Date: 13/07/2021
- Monitoring period amended to 7th. - Vintage end years amended to 2020.		
Documentation Provided as Evidence by Project Participant		
<i>Revised MR</i>		
Information Verified by Team Leader		Date of review: 13/07/2021
<i>Revised MR</i>		
Reasoning for not acceptance or close out		
- The monitoring period number has been corrected to 7. Hence, the finding is closed. - The correction has been done in the revised MR. Hence, the finding is closed.		

Date of acceptance or non- acceptance	Date: 13/07/2021	Status: Closed
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Date	Type & Number	Raised by	Reference
12/07/2021	CAR 02	Assessment team	3.2
Non conformities raised			
Under section B.1 of the submitted GS MR, PP has stated that ‘A total of 21 BSF filters were repaired, 14 of them had a total of 92 days where they were not operational’, however, as per the complaint data sheet, the number of non-operations days is mentioned as 93 .			
Project Participant’s response		Date:13/07/2021	
PP has ammended the total number of days for BSF when the filter was not operational from 92 to 93. 92 was an error.			
Documentation Provided as Evidence by Project Participant			
Revised MR			
Information Verified by Team Leader		Date of review: 13/07/2021	
Revised MR			
Reasoning for not acceptance or close out			
The number of non-operational days has been corrected in the revised MR and was found to be consistent with supportive. Hence, the finding is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	CAR 03	Assessment team	3.2
Non conformities raised			
1. Under section C of the submitted GS MR, the start date of MP mentioned is incorrect. 2. Under section C of the submitted GS MR, the total population mentioned for HHFF is incorrect. 3. Under section C of the submitted GS MR, PP has used futuristic language under project field test which is not the current representation for the monitoring period.			
Project Participant's response		Date: 13/07/2021	
1. Correct start date mentioned. 2. Correct number for HHFF is 2,212 3. Correct language used to indicate the current situation			
Documentation Provided as Evidence by Project Participant			
Revised MR			
Information Verified by Team Leader		Date of review: 13/07/2021	
Revised MR			
Reasoning for not acceptance or close out			
1. The start date of the MP has been revised and was found to be acceptable. Hence, the finding is closed. 2. The correction has been done in the revised MR. Hence, the finding is closed. 3. The language has been ammended in the revised MR. Hence, the finding is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	CAR 04	Assessment team	3.7
Non conformities raised			

- Under section D.1 of the submitted GS MR, ex-ante parameters 'GWP for CH₄ and N₂O' is missing as per the registered PDD. - Under section D.1 of the submitted GS MR, for the ex-ante parameter 'Wb,y', PP shall mention how the data was derived under 'Choice of data or Measurement methods and procedures'. Also, the source of data and the value applied is inconsistent with the registered PDD. - Under section D.1 of the submitted GS MR, for the ex-ante parameter 'EFb, fuel, CH₄', the unit mentioned is incorrect and inconsistent with registered PDD. - Under section D.1 of the submitted GS MR, for the ex-ante parameter 'EFb, fuel,N₂O', the unit and description mentioned is incorrect. - Under section D.2 of the submitted GS MR, for the monitoring parameter 'Np,y', the purpose of data mentioned is inconsistent with the registered PDD. - Under section D.2 of the submitted GS MR, for the monitoring parameter 'Quality of Treated Water', PP has stated that 'The water quality testing values obtained were 100% for BSF, HHFF and IHFF respectively'. However, for HHFF, the quality of treated water is 98.6%. PP shall correct the same. - Under section D.3 of the submitted GS MR, the values obtained last monitoring period for BSF, HHFF and IHFF was found to be inconsistent with the previous MR. - Under section D.3 of the submitted GS MR, the value for quality of filtered water during this monitoring period for HHFF was found to be inconsistent with the ER sheet. - Under section D.3 of the submitted GS MR, the value of usage rate and Qpy for current MP for IHFF was found to be inconsistent with the ER sheet. - Under section D.4 of the submitted GS MR, the population size for HHFF and IHFF in the sample size calculator screenshots has been mentioned as '2070' and '164' respectively. However, as per the other sections of the MR, it is '2212' and '192' respectively. PP shall add the corrected screenshots with revised population size.	
Project Participant's response	Date: 13/07/2021
- Under ex-ante parameters, PP has added GWP for CH₄ and N₂O. - PP applied GS default values as this was a requirement by the GS that any previous values obtained during the baseline survey by the projects that exceeded 400g were to be capped to 400g. PP has mentioned the same on the MR. - Units for Efb, fuel, CH₄ have been amended to be consistent with the PDD. - Parameter Efb,fuel, N₂O unit has been amended to be consistent with the registered PDD. - Purpose of the data for parameter Np,y now amended to be in line with the registered PDD. - Quality of treated water for HHFF has been amended to 98.6. - Values that are erroneous have been amended for consistency with the previous MR. - Value of treated water amended and correct figure indicated. - Usage rate for this period for HHFF is 92.64 while Qp,y is 7, whereas Qp,y for previous period has been amended to 4l/p/d. - This has been amended with correct figures i.e. 2212 for HHFF and 192 for IHFF and correct screen shot provided.	
Documentation Provided as Evidence by Project Participant	
<i>Monitoring survey summary</i> <i>Previous period MR</i> <i>Revised MR</i>	
Information Verified by Team Leader	Date of review: 13/07/2021
<i>Monitoring survey summary</i> <i>Previous period MR</i> <i>Revised MR</i>	
Reasoning for not acceptance or close out	

1. The ex-ante parameters 'GWP for CH4 and N2O' has been now included in the revised MR. Hence, the finding is closed.
2. The justification provided by PP was found to be acceptable. Hence, the finding is closed.
3. The correction has been done in the revised MR. Hence, the finding is closed.
4. The correction has been done in the revised MR. Hence, the finding is closed.
5. The correction has been done in the revised MR. Hence, the finding is closed.
6. The correction has been done in the revised MR. Hence, the finding is closed.
7. The correction has been done in the revised MR. Hence, the finding is closed.
8. The correction has been done in the revised MR. Hence, the finding is closed.
9. The correction has been done in the revised MR. Hence, the finding is closed.
10. The correction has been done in the revised MR. Hence, the finding is closed.
Date of acceptance or non- acceptance
Date: 13/07/2021
Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	CAR 05	Assessment team	3.8
Non conformities raised			
1. Under section E.1 of the submitted GS MR, the value of total baseline emissions for all the three type of filters is inconsistent with the ER sheet. 2. Under section E.2 of the submitted GS MR, the value of total emission reductions achieved for HHFF and IHFF filters is incorrect. 3. Under section E.2 of the submitted GS MR, the value of number of people attending workshops is found to be incorrect for HHFF technology. 4. Under section E.4 of the submitted GS MR, the baseline estimate for Volume of safe water consumed for BSF filter shall be zero. Also, the number of filters sold in baseline estimate shall be zero for all the filter technology. PP shall correct the same. 5. Under section E.5 of the submitted GS MR, the number of filters sold during current monitoring period for BSF is found to be inconsistent with the ER sheet.			
Project Participant's response		Date: 13/07/2021	
1. Values for baseline Ers under section E.1 of the MR have been ammended. Baseline Ers sheet has been provided as a support document. 2. Values of total Ers under section E.2 of MR ammended for HHFF and IHFF 3. Under section E. Value of people attending trainings ammended to 85. 4. Under section E4. baseline estimates for volume of water has been changed to 0 for BSF as well as number of filters sold has been changed to 0 for all filter technologies. 5. Number of BSF filters sold ammended under section E.5			
Documentation Provided as Evidence by Project Participant			
Revised MR			
Information Verified by Team Leader		Date of review: 13/07/2021	
Revised MR			
Reasoning for not acceptance or close out			
1. The correction has been done in the revised MR. Hence, the finding is closed. 2. The correction has been done in the revised MR. Hence, the finding is closed. 3. The correction has been done in the revised MR. Hence, the finding is closed. 4. The correction has been done in the revised MR. Hence, the finding is closed. 5. The correction has been done in the revised MR. Hence, the finding is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	CAR 06	Assessment team	3.8
Non conformities raised			
In ER sheet (tab; Consolidated ERs 2020-2021), the total emission reductions are not rounded down.			
Project Participant's response		Date:13/07/2021	
Figures rounded down, total Ers claimed 29,547			
Documentation Provided as Evidence by Project Participant			
Revised ER sheet			

Information Verified by Team Leader		Date of review: 13/07/2021
<i>Revised ER sheet</i>		
Reasoning for not acceptance or close out		
The total emission reductions have been rounded down in the revised ER sheet. Hence, the finding is closed.		
Date of acceptance or non- acceptance	Date: 13/07/2021	Status: Closed

Table 3. CL from this verification

Date	Type & Number	Raised by	Reference
12/07/2021	CL 01	Assessment team	3.2
Non conformities raised			
The following documents shall be furnished by PP for further verification process: 1. Transition Annex approved by the Gold Standard 2. Aqua Clara International: total sales record for the filters sold till the end of this monitoring period i.e., 18/02/2021 3. Approved performance review report of last monitoring period			
Project Participant's response		Date: 13/07/2021	
1. Transition Annex approved by the Gold Standard - Provided 2. Aqua Clara International: total sales record for the filters sold till the end of this monitoring period i.e., 18/02/2021 – TSR is combined with sample frame though they are on different tabs. This was already provided. 3. Approved performance review report of last monitoring period			
Documentation Provided as Evidence by Project Participant			
As above			
Information Verified by Team Leader		Date of review: 13/07/2021	
As above			
Reasoning for not acceptance or close out			
1. the approved transition annex has been provided by PP and was found to be acceptable. Hence, the finding is closed. 2. the sales records have been provided by PP and was found to be acceptable. Hence, the finding is closed. 3. The approved performance review report has been provided. Hence, the finding is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	CL 02	Assessment team	3.7
Non conformities raised			
Under section D.1 of the submitted GS MR, PP has included parameters like 'Bp' and 'f NRB,j,' which is not stated in the registered PDD and previous verifications as well. Kindly clarify.			
Project Participant's response		Date: 13/07/2021	
PP included hose parameters as they are part of Ers calculation. PP has removed them though for consistency with registered PDD and previous verification.			
Documentation Provided as Evidence by Project Participant			
Revised MR			
Information Verified by Team Leader		Date of review: 13/07/2021	
Revised MR			
Reasoning for not acceptance or close out			
The parameters have been removed in order to be consistent with the registered PDD. Hence, the finding is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Date	Type & Number	Raised by	Reference
12/07/2021	CL 03	Assessment team	3.7
Non conformities raised			
During the remote audit interviews with the end users, the verification team observed that some of the HHFF filters are operational for more than 5 years (for example: Filter ID: KS-30, operational since 2013). However, it has been stated by PP that the lifetime of the HHFF filters are 5 years. Kindly clarify.			
Project Participant's response		Date: 13/07/2021	
The lifetime of HHFF is 5 years however, as the representatives from Aqua Clara mentioned, with proper maintenance, the filter can be used for longer periods. Should such a filter need replacements of the membranes, Aqua Clara team does so for the end-users.			
Documentation Provided as Evidence by Project Participant			
-			
Information Verified by Team Leader		Date of review: 13/07/2021	
-			
Reasoning for not acceptance or close out			
The justification provided by PP was found to be acceptable. Hence, the finding is closed.			
Date of acceptance or non- acceptance		Date: 13/07/2021	Status: Closed

Table 4. FAR from this verification

No FAR raised.

Date	Type & Number	Raised by	Reference
Non-conformities raised			
Project Participant's response		Date:	
Documentation Provided as Evidence by Project Participant			
Information Verified by Team Leader		Date of review:	
Reasoning for not acceptance or close out			
Date of acceptance or non- acceptance		Date:	Status:

8. CERTIFICATE OF COMPETENCE

Personnel Name:		Ms. Deboshmita Dey	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure		
Approved by (Manager C & T)	Sanjay Kandari		
Approval date:	14/01/2021		

Personnel Name:		Sanjay Kandari	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure		
Approved by (Manager C & T)	Akhilesh Joshi		
Approval date:	11/12/2015		

Personnel Name:		Tushar Eknath Chaudhari	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		

Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
Energy demand	TA 3.1. Energy Demand
Waste Handling and Disposal	TA 13.1 Solid waste and wastewater
Approved by	Manager Competency & Training
Approval date:	02/09/2020

Annex-1

List of End users interviewed during the off-site remote audit assessment

Sr. No.	Name of End users/ Institutions	Filter no./ Filter type	Location	Interviewed Date
1	Richard Muma Rangi	KS-30 (HHFF) (Acceptance sample from Usage survey)	Nyamira	08/07/2021
2	Ann Tonui	HF15P-1188 (HHFF) (Acceptance sample from Usage survey)	Kericho	08/07/2021
3	Mellen Mose Mogaka	B17-130 (BSF) (Acceptance sample from Usage survey, Monitoring survey, WCFT)	Nyamira	08/07/2021
4	David Omoi Mose	PB396 (BSF) (Acceptance sample from Usage survey)	Rigoma	08/07/2021
5	Jerusa karata	KB2-13 (BSF) (Acceptance sample from Usage survey)	Nyamira	08/07/2021
6	Selena Yebei	HF15P-3632 (HHFF) (Acceptance sample from Usage survey)	Bomet	08/07/2021
7	Bathsheba kerubo Nyabera	B17-121 (BSF) (Acceptance sample from Usage survey)	Kisii	08/07/2021
8	Druscilla - Wilma Academy	HF100-240 (IHFF), HF10-157 (IHFF), HF15P-3216 (HHFF) (Acceptance sample from Usage survey)	Kebirigo	08/07/2021
9	Kenneth Ogato- St. Cyprian Secondary School	HF15P-3788 (IHFF) (Acceptance sample from Usage survey)	Nyamira	09/07/2021
10	Charles Araka	KC2-54 (BSF) (Acceptance sample from Usage survey)	Kisii	08/07/2021
11	Marcella Ogega	41750 (BSF) (Acceptance sample from Usage survey)	Kisii	08/07/2021
12	James Arori- Kenyerere PAG church	HF15P-2803 (IHFF) (Acceptance sample	Nyamira	09/07/2021

		from Usage survey)		
13	Fred Miruka	HF15P-722 (HHFF) (Acceptance sample from Usage survey)	Kisii	09/07/2021
14	Zablon Okindo	KF14-18 (BSF) (Acceptance sample from Usage survey)	Kisii	09/07/2021
15	Salim Mohammed- Salmax Creations	HF15P-1742 (IHFF) (Acceptance sample from Usage survey)	Kisumu	09/07/2021
16	Kennedy- Mercy Boarding Academy	HF100-236 (IHFF) (Acceptance sample from Usage survey)	Sotik	09/07/2021
17	Esther Kerubo Kambuni	B15-140 (BSF) (Acceptance sample from Usage survey)	Kisii	09/07/2021
18	Alice Nyabate	KE2-71(BSF) (Acceptance sample from Usage survey)	Nyamira	09/07/2021
19	Beatrice Kerubo Nyakundi	KS-32 (HHFF) (Acceptance sample from Usage survey, Monitoring survey and WCFT)	Nyamira	09/07/2021

Sample copy of questionnaire used during remote audit interview.

Date:

Name of person interviewed:

Designation:

Location:

Type (BSF/HHFF/IHFF) and Serial number of the filter:

Date of installation/commissioning of the filter:

Status of filter: *Operational/Under maintenance*

Q1. Is the water filter currently in use? How many filters have been installed?	Yes/No <i>Number of filters:</i>
Q2. Is there any baseline fuel still in use instead of the water filter? If yes, which fuel is used and what time it takes to collect that fuel?	Yes/No <i>Which fuel:</i> <i>Time taken to collect the fuel:</i>
Q3. Was there any health-related issues like breathing problem, water borne-diseases etc due to the usage of baseline?	Yes/No <i>Issues:</i>
Q4. Do you face any health-related issues like breathing problem, water borne-diseases etc. now while using the water filter?	Yes/No
Q5. Who distributed the water filter? What was the mode of distribution?	
Q6. Did the team contact you for monitoring of the filters and their maintenance check? If yes, when and how?	Yes/No <i>When and how:</i>
Q7. Were you part of the training/workshop on water hygiene/maintenance of water filter?	Yes/No
Q8. Are you aware that the project promotes employment to local people?	Yes/No
Q9. Are you satisfied with the water filter services?	Yes/No
Q10. Any replacement or maintenance of filter done in past?	Yes/No

Based on the end user's interview, VVB summarises the following common outcome observed.

Questions	Outcome of End user's interview
Q1. Is the water filter currently in use? How many filters have been installed?	As per the responses provided by the water filter users, the answer was affirmative. The water filter was in use for drinking water and 1 filter has been installed at each households. The institutions had more than 1 filters.
Q2. Is there any baseline fuel still in use instead of the water filter? If yes, which fuel is used and what time it takes to collect that fuel?	As per the responses provided by the water filter users, none of the users use baseline fuel now.
Q3. Was there any health-related issues like breathing problem, water borne-diseases etc due to the usage of baseline?	As per the responses, breathing problem, eye problem, stomach ache, typhoid etc. was mentioned while using the baseline.
Q4. Do you face any health-related issues like breathing problem, water borne-diseases etc. now while using the water filter?	The users mentioned that no health-related issues occurred due to the use of the project technology.
Q5. Who distributed the water filter? What was the mode of distribution?	The users mentioned that the water filter was distributed to them by sales agent from the Aqua Clara. Also, few users mentioned that they got from community development group from aqua clara.
Q6. Did the team contact you for monitoring of the filters and their maintenance check? If yes, when and how?	As per the responses provided by the water filter users, the answer was affirmative. The aqua clara team do call and give visits for maintainence or taking water samples.
Q7. Were you part of the training/workshop on water hygiene/maintenance of water filter?	As per the responses provided by the water filter users, the answer was affirmative except few did not.
Q8. Are you aware that the project promotes employment to local people?	As per the responses provided by the water filter users, the answer was affirmative.
Q9. Are you satisfied with the water filter services?	As per the responses provided by the water filter users, the answer was affirmative.
Q10. Any replacement or maintenance of filter done in past?	Most of the users mentioned that no replacement was required. However, few maintenances were done.

Apart from above responses, all end users confirmed that they are satisfied and would like to continue use of the filter.

History of the document

Version	Date	Nature of revision	Reviewed by	Approved by
4.0	14/12/2013	Guidance included/improved	Manager CDM Quality 23/12/2013	Managing Director 23/12/2013
3.1	29/10/2012	Updated for EB69 Annex6	Manager CDM Quality 29/10/2012	Managing Director 29/10/2012
3.0	31/08/2012	Revised for VVS Track	Manager CDM Quality 08/09/2012	Managing Director 10/09/2012
2.0	21/12/2011	Comprehensively revised	Manager CDM Quality 21/12/2011	Managing Director 21/12/2011