Verification and certification report form for CDM project activities

(Version 01.0)

Complete this form in accordance with the "Attachment: Instructions for filling out the verification and certification report form for CDM project activities" at the end of this form.

VERICATION AND CERTIFICATION REPORT	
Title of the project activity	Energy Efficient Cook Stoves for Siaya Communities, Kenya
Reference number of the project activity	GS 879
Version number of the verification and certification report	1.1
Completion date of the verification and certification report	27/02/2018
Monitoring period number and duration of this monitoring period	6th Monitoring period Duration: 1 year from 01/01/2017 to 31/12/2017 both days included
Version number of monitoring report to which this report applies	2.1
Crediting period of the project activity corresponding to this monitoring period	First Crediting period
Project participant(s)	Myclimate Foundation and Tembea Youth Centre for Sustainable Development
Host Party	Kenya
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Sectoral scope: Energy demand (3.1) GS Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption-11/04/2011
Estimated GHG emission reductions or net anthropogenic GHG removals for this monitoring period in the registered PDD	86,633 tCO_2e
Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period	109,698 tCO_2e
Name of DOE	Bureau Veritas India Pvt. Ltd. (BVI), UNFCCC Ref. no. E-0009
Name, position and signature of the approver of the verification and certification report	Sapana Pednekar - Quality Manager- Operations

SECTION A. Executive summary

Bureau Veritas India Pvt. Ltd. (BVI) has conducted the 6th periodic verification of the project "Energy Efficient Cook Stoves for Siaya Communities, Kenya"; Gold Standard registration reference number GS 879. The project is developed by MyClimate Foundation and Tembea Youth Centre for Sustainable Development, and is located in Siaya County, Kenya. The project is applying the Gold Standard methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011)".

The verification was based on:
a) Requirements for Voluntary Offset Projects under the Gold Standard, including the applied Gold Standard methodology. The Gold Standard requirements are stipulated in the GS Requirements– version 2.2 and The Gold Standard Toolkit version 2.2.
b) UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The verification scope is defined as an independent and objective review and ex-post determination of the monitored GHG emission reductions, and consisted of the following three phases:
i) Desk review of the monitoring report, project design, the baseline and monitoring plan;
ii) Follow-up interviews with project stakeholders;
iii) Resolution of outstanding issues and the issuance of the final verification report and opinion.

The overall verification, from Contract Review to Verification Report and Opinion, was conducted using Bureau Veritas India Pvt. Ltd. (BVI) internal procedures.

In summary, Bureau Veritas India Pvt. Ltd. (BVI) confirms that the project is implemented as planned and described in the validated and registered project design documents. Installed equipment (i.e. efficient cook stoves) being essential for generating emission reduction run reliably. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reductions are calculated without material misstatements, and the emission reductions verified totalize 109,698 tCO_2e for the monitoring period.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported; and related to the valid and registered project baseline, approved monitoring plan and its associated documents.

Reporting period:	01/01/2017 to 31/12/2017 (both days included)
Baseline emissions:	Integrated in ER calculation formula
Project emissions:	Integrated in ER calculation formula
Leakage emissions:	0 t CO_2 equivalents
Emission Reductions:	109,698 t CO_2 equivalents.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader	IR	**Chirchir**	**James**	Bureau Veritas India Pvt. Ltd. (BVI)	x	x	x	x

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Onsongo	Samuel	Bureau Veritas India Pvt. Ltd. (BVI)
2.	Approver	IR	Pednekar	Sapana	Bureau Veritas India Pvt. Ltd. (BVI)

SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	*Incorrect capture of the date of construction of each stove*	*High*	***Likelihood** – more likely to occur due to manual data capture and transfer to excel based database.* ***Impact** - over estimation of the number of days the stove has been in use. Hence over estimation of ERs claimed*	*To randomly cross check a sample of receipts/Stove Purchase Agreement with the information in the database during onsite assessment.*
2.	*Over estimation of the stove usage rate*	*Medium*	***Likelihood** – may occur due to manual transfer of survey information from handwritten questionnaires to excel sheets. However there exist internal quality controls.* ***Impact** – higher usage rate and hence over estimation of ERs claimed.*	*Randomly cross check a sample of hand-written survey records to determine whether the transfer of information was performed effectively. Visit a sample of survey respondents during on-site assessment.*
3.	*Data fudging (over estimation of number of stoves installed)*	*Medium*	***Likelihood** – may occur due to manual data entry. However, controls such as financial audits exist to limit the likelihood that more stoves may be included than actually installed.* ***Impact** – over estimation of ERs claimed.*	*Randomly select and visit a sample of locations and users where there seems to be multiple stoves installed.*
4	*Incorrect ERs calculation*	*Medium*	***Likelihood** – less likely to occur since the PP has used the same tools (i.e. spreadsheets), that have been verified in the 2nd, 3rd and 4th cycles of verification.* ***Impact** – Over estimation of ERs claimed.*	*Recalculate ERs using parameters reported by PP to determine if the reported ERs can be reproduced*

C.2. Consideration of materiality in conducting the verification

The DOE has applied the concept of materiality in this verification. Consideration of materiality began by determining the materiality threshold to be applied. The DOE used a threshold of 5% as provided for in the methodology (refer to page 34 of the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption - 11/04/2011).
The DOE assessed the risks indicated in section C.1 above, based on sampling (refer to section D.4 below) and applying the materiality threshold of 5% as follows:

- Risk No.1 - dates from a random sample of 8 receipts/ Stove Purchase Agreement was compared with the dates in the stove database. No discrepancies were observed. The data was accepted and no more samples were taken.

- Risk No.2 - a random sample of 8 hand-written survey records were compared with information in the survey database. No discrepancies were observed. The data was accepted and no more samples were taken.
. The DOE further visited and had confirmation interviews the respondents of the 8 sampled questionnaires.

- Risk No.3 – was assessed together with GS Forward Action Request # 1 raised during the 4th verification cycle. The verification team filtered the sales database for data that seemed to be duplicated. The results were two sets of data: single-location multiple-stoves and single-user multiple-stoves. The verification team then randomly selected 8 samples from each of the sets. From the 16 samples randomly selected, the verification team visited 11 samples during the onsite assessment to cross check the validity of the provided information. The team also visited 5 more samples where the PP had addressed the FAR raised. In total, 37 stoves were assessed during this verification, and all the stoves were traceable except 2, which had been demolished. No material error from omission or commission was observed, although the following was observed:
i. Users who seemed to have multiple entries in the sales database acquired extra stoves for their relatives or neighbours. But unique users of the stoves had been identified by the PP during this verification as they addressed an FAR raised during 4th verification circle.
ii. Some coordinates in the sales database indicate stoves to be in the same location e.g. stove no. TEMBEA11/1741 and TEMBEA11/3370, however the stoves were found to be about one hundred meters apart. The PP indicated that the coordinates were not recorded accurately by the artisans and are thus not used to locate stoves.

- Risk No.4 - using the data and parameters reported by the PP, the DOE has been able to reproduce the same amount of ERs being claimed by the PP, by following the formulae provided in the methodology. The ER calculations by the PP are accepted.

SECTION D. Means of verification

D.1. Desk review

The assessment of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the monitoring report (MR) version 02.1 dated 29/01/2018 (refer to doc 1 in Appendix 3) and emission reduction calculation spreadsheet dated 20/1/2017 (refer to doc 2 in Appendix 3). Qualitative information comprises information on internal management controls, calculation procedures, and data transfer procedures, frequency of emissions reports; and review of calculations. The monitoring report version 1 submitted by the project participant has been made available to Gold Standard.

Information reviewed included documents and records supporting the number of ER calculations claimed by the project participants, as well as documents and records to support the assertions on the sustainable development indicators. These included:

Documents and records for ER calculations:
- Monitoring Report version 2.1 (ref to doc 8 in Appendix 3)
- Project Design Documents (refer to doc 6 in Appendix 3)
- Emission reduction (ER) Calculations spreadsheets (refer to doc 2 in Appendix 3)
- Project database (refer to doc 2 in Appendix 3)
- FAR raised during previous verification (refer to doc 4 in Appendix 3)
- Email communication between PP and GS (refer to doc 5 in Appendix 3)
- Monitoring and Usage survey report version 01 (refer to doc 3 in Appendix 3)
- Sales records (refer doc 17 in Appendix 3) and
- Financial Audit report (refer to doc 9 in Appendix 3)

Documents and records for sustainable development indicators:
- Monitoring Report version 2.1(ref to doc 8 in Appendix 3)
- Training records (ref to doc 10 in Appendix 3)
- Monitoring and usage survey version 01 (refer to doc 3 in Appendix 3)
- Project Design Documents with GS passport (refer to doc 6 in Appendix 3)
-
- Financial Audit report (refer to doc 9 in Appendix 3)

NOTE: Some of the above documents and records were reviewed off site, while others were reviewed onsite. The full list of the documents and records reviewed is provided in Appendix 3.

D.2. On-site inspection

Duration of on-site inspection: 11/12/2017 to 14/12/2017				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Introduction meeting	Tembea Offices, Siaya	11/12/2017	James Chirchir
2.	Field visit (Sites with multiple stoves installed)	Various locations in Siaya	11/12/2017	James Chirchir
3.	Field visit (Owners with multiple stoves installed)	Various locations in Siaya	12/12/2017	James Chirchir
4.	Field visit (Usage/Monitoring Survey participants	Various locations in Siaya	13/12/2017	James Chirchir
5.	Records review and closing meeting	Tembea Offices, Siaya	14/12/2017	James Chirchir

D.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1.	Orina	Job	Myclimate	11/12/2017	Project implementation, Monitoring data, QA/QC, reporting	James Chirchir
2.	Omondi	Victor	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
3.	Atieno	Sarah	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
4.	Onyango	Mercelyne	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
5.	Apel	Carren	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
6.	Okello	Daniel	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
7.	Ogutu	Judith	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
8.	Atieno	Lucy	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
9.	Owino	Emilly	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
10.	Adhiambo	Caroline	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
11.	Achieng	Lindah	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
12.	Omondi	Juliana	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
13.	Akoth	Grace	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir
14	Akoth	Irene	TYCS	11/12/2017	Monitoring and Data collection	James Chirchir

D.4. Sampling approach

a) The DOE employed acceptance sampling (as described in CDM Standard for Sampling and surveys for CDM project activities and programme of activities version 04.0) as a means of verification; where the project participant employed sampling to determine parameters/values reported. The following conditions were applied to determine the sample size taken by the DOE:
(i) Acceptable quality level or the Level of Assurance (AQL). AQL = 1%
(ii) Unacceptable quality level (UQL). UQL = 20%
(iii) Producer's risk = 10%
(iv) Consumer's risk = 20%

b) For all other sampling efforts, the DOE employed 90/30 confidence/precision, as the criteria for reliability of sampling efforts. The sample size was determined using the 90/30 rule and an expected value of 50%, since no specific value was being sought. These values were then input into an online tool ref http://www.raosoft.com/samplesize.html to determine the sample size. The table below show the sample sizes for both cases a) and b) above:

Activity verified	Minimum Sample size	Actual sample size taken
Monitoring and usage survey	8	8 questionnaires assessed and 8 respondents interviewed during onsite assessment, all the interviewed respondents participated in the usage and monitoring surveys
Sales records	8	8 Sales receipts were reviewed
Risk of data fudging (Single location with multiple stoves and Single user with multiple stoves)	16	16 locations visited (37 Stove users visited)

The sampling method used to select samples for verification and visit was simple random sampling. Details of the samples above are provided in Appendix 5.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	1	1	N/A
Compliance of the project implementation with the registered PDD	0	0	0
Post-registration changes	N/A	N/A	N/A
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	0	0	0
Compliance of monitoring activities with the registered monitoring plan	0	0	0
Compliance with the calibration frequency requirements for measuring instruments	0	0	0
Assessment of data and calculation of emission reductions or net removals	0	1	0
Others (Action on FAR)	0	0	0
Total	1	2	0

SECTION E. Verification findings

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

Means of verification	Desk review of monitoring report
Findings	This section is not applicable, since the use of CDM forms is not a requirement of Gold Standard
Conclusion	The PP has used monitoring report template similar to previous monitoring cycles. In the report, the PP has provided all the information as required by Gold Standard.

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

The DOE has established that the PP requested the GS to address the FAR raised during the 4th periodic verification over a period and complete the correction by the 6th periodic verification, as seen in the email correspondence with GS (ref doc 5 in Appendix 3).

In the FAR, the GS had requested that as part of the next monitoring the PP shall provide evidence of unique users of 1320 duplicate data stoves for instance it shall provide names of women in polygamous families, names or pictures of end users using mobile number and address of relatives or friends to ensure uniqueness and verifiability of data.

The PP had provided the DOE an excel list of all the 1320 duplicate data stoves (ref to doc 23 in Appendix 3), including unique names actual stoves users. From the provided list, the verification team selected at random a list of 8 unique stove users and visited 5 of them during this verification site visit and confirmed the actions taken as sufficient to address the FAR.

The FAR is now closed out as detailed in appendix 3 below. The DOE confirms that the PP has completed the implementation of the action proposed in the FAR (refer to Appendix 5).

E.3. Compliance of the project implementation with the registered project design document

Means of verification	**Document review:** Monitoring report version 2.1 (ref doc 8 Appendix 3) and version 2.1 (ref doc 1 Appendix 3), registered PDD (ref doc 6 Appendix 3), employment records (ref to doc 11 in Appendix 3) , Financial audit report (refer to doc 9 in Appendix 3), **Site visit**: Interviews with PP's representative, monitoring team and stove users, and Observation of stove technology implemented
Findings	Compliant, no findings were raised.
Conclusion	The DOE has performed a site visit and found that implementation and operation of the project activity has been in accordance with the description contained in the registered PDD. The PP has continued to install energy efficient cook stoves in household in Siaya County in Kenya. The stove technology installed, is a fixed biomass rocket stove designed for burning woody biomass and consists of two cooking units that can be fired separately. No changes to the project design were identified during this verification. The organizational structure for project monitoring remains the same as in the registered PDD and previous monitoring periods. The project employed 1 new staff in this monitoring period. All staff involved in monitoring are trained as indicated in the previous monitoring reports. Corresponding to paragraph 359 of VVS for CDM PA version 01.0, the DOE can confirm that the implementation and operation of the Project is consistent with the registered PDD.

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Not applicable

E.4.2. Corrections

Not applicable

E.4.3. Changes to the start date of the crediting period

Not applicable

E.4.4. Inclusion of a monitoring plan to a registered project activity

Not applicable

E.4.5. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

Not applicable

E.4.6. Changes to the project design of a registered project activity

Not applicable

E.4.7. Types of changes specific to afforestation and reforestation project activities

Not applicable

E.5. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	**Document review** The DOE reviewed the following documents: Monitoring report version 2.1 (ref doc 8 Appendix 3) and version 2 (ref doc 1 Appendix 3), registered PDD (ref doc 6 Appendix 3), Monitoring manual (ref doc 7 Appendix 3), Applied methodology (ref doc 14 Appendix 3), to establish whether the monitoring plan was in line with the monitoring methodology.
Findings	Compliant
Conclusion	The DOE has verified the monitoring plan, including the data and parameters required to be monitored, measurement procedures, monitoring frequency and QC/QA procedures and confirms compliant with the applied methodology. Corresponding to the paragraph 362 of VVS for CDM PA version 01.0, the DOE can confirm that the implemented monitoring plan is in accordance with the approved methodology (Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011) applied by the Project.

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	**Document review** For the parameters determined and fixed ex ante, the DOE has crosschecked the values as reported in the monitoring report with values provided in the registered PDD and IPCC default values. The DOE also assessed the application of the values in calculation of emission reductions.
Findings	Values have been reported and applied correctly
Conclusion	The following parameters were determined and fixed ex ante: - $EF_{b,co2}$ - CO_2 emission factor arising from use of wood-fuel in baseline scenario (1.7472 tCO_2/t wood) - $EF_{b,non-co2}$ - Non-CO_2 emission factor arising from use of wood-fuel in baseline scenario (0.1356 tCO_2eq/t wood from 01.01.2013 on). The PP used the GWP for CH_4 & N_2O, valid from 01/01/2013 (ref EB69 annex 3). - $EF_{p,co2}$ - CO_2 emission factor arising from use of wood-fuel in project scenario (1.7472 tCO_2/t wood (=112.0 tCO2/TJ * 0.0156 TJ/ t)). - $EF_{p,non-co2}$ - Non-CO_2 emission factor arising from use of wood-fuel in project scenario (0.1356 tCO_2eq/t wood from 01.01.2013 on). The PP used the GWP for CH_4 & N_2O, valid from 01/01/2013 (ref EB69 annex 3). - $f_{NRB,i,y}$ - Non-renewability status of woody biomass fuel in scenario I during year y (92%). The PP has updated the f_{NRB} with the official value approved by the DNA of Kenya (ref link). This was verified in the previous verification cycles . Although the verification team noted that the f_{NRB} as currently published expired in September 2017, an email communication between the Gold Standard and the PP on 11th Sept 2017 indicated that : “if the project had already applied the default value (before its expiry) at the time of submission to GS, then that would be allowed till a new default value is published. The project already applied the NRB default value in the first

	crediting period. Thus, the default value can be applied until a new default value is published. - $P_{b,y}$ - Quantity of woody biomass consumed in the baseline scenario in year y and per day in year y (2.6645 t wood/year and 0.0073 t wood/day) - $P_{p,y}$ - Quantity of woody biomass consumed in the project scenario in year y and per day in year y (1.2732 t wood/year and 0.0035t wood/day) The DOE confirms that the parameters have been correctly reported and applied in emission reductions calculation

E.6.2. Data and parameters monitored

E.6.2.1. Data and parameters monitored for GHG emission reductions calculation

Means of verification

Parameter 1 – Project technologies credited (units)

MoV: The parameter was verified by reviewing the Financial Audit Report (ref doc 9 in Appendix 3), Previous monitoring report (ref doc 12 in Appendix 3, Previous verification report (ref doc 13 in Appendix 3). Further, during site visit a random samples of 8 stoves from the sales database (for the period January – November 2017) was selected and the information crosschecked with the corresponding receipts/Stove Purchase Agreements. The sampling approach is described in section D.4. above. No discrepancies have been observed. The DOE considers that the PP has monitored and reported the parameter as required. The following values are reported:

Year	number of stoves
2010	324
2011	4,662
2012	5,139
2013	5,187
2014	6,840
2015	14,186
2016	7,819
2017	6,940
TOTAL	**51,097**

Parameter 2 – $P_{p,y}$ (Quantity of woody biomass consumed in the project scenario in year y and per day in year y)

MoV: The DOE has reviewed the registered PDD and monitoring methodology to determine the monitoring and reporting requirement of the parameter. As per the registered PDD, it is required that this parameter be updated every two years through field tests, hence the PP carried out a field test in 2017, since the last update was done in 2015. By conducting the site visit interviews, review of 8 randomly selected questionnaires and the transfer of primary data in to an excel sheet for analysis, reviewing the PFT Update 2017 Analysis (ref to doc 19 in Appendix 3), Project FT Update Report 2017 V01 (ref to doc 20 in Appendix 3), the field test was assessed by the verification team found acceptable. The verification team in addition, subjected the results from valid samples as submitted by the PP to tests that confirms they met the 90/30 rule as required by the applied methodology. The verification team was able to replicate the results as presented in the PFT report (ref to doc 20 in Appendix 3) and thus the DOE confirms the claim that the 90/30 rule was met for the sample used in the calculation of PFT for 2017. The DOE has assessed the application of the value reported (0.0035t wood/day) in emission reductions calculation and confirms that it has been applied correctly.

Parameter 3 – U_{py} (Usage rate in project scenario during year y)

MoV: According to the registered PDD and the methodology the parameter is monitored annually through usage survey. The PP has carried out a usage survey as required (ref monitoring and usage report doc 3 in Appendix 3). The DOE confirms that the PP has implemented the sampling plan described in the

	Monitoring manual (ref doc 7 Appendix 3). The transfer of survey information and data analysis has been reviewed (refer to assessment of risk no. 2 in section C.2. above). From the review the DOE considers that the result of the usage survey (a cumulative usage rate of 95.1%) is acceptable and the PP has correctly monitored and applied the parameter in emission reductions calculation. **Parameter 5 – $N_{p,y}$** (Project technologies days**)** **MoV:** The parameter was verified by randomly selecting 8 samples from the sales database and comparing the information with the corresponding receipts/Stove Purchase Agreements during site visit (refer to assessment of Risk No. 1 in section C.2 above). The sampling approach is described in section D.4. above. The DOE considers that the PP has monitored and reported the parameter as required. The following value (17,408,464 days) is reported and applied correctly in emission reductions calculation. **Parameter 6 – $LE_{p,y}$** (Leakage in project scenario p during year y) **MoV:** The DOE confirms that the PP has monitored the parameter as required through a monitoring survey. The monitoring survey was carried out together with the usage survey. The DOE has also assessed the monitoring survey together with the usage survey (refer to DOE's review on parameter 3 above). The DOE considers that the PP has monitored and reported the parameter as required. A value of zero (0) leakage has been applied in emission reduction. **Parameter 7 – Similar cook stove project activities in the project area** **MoV:** The DOE has reviewed project listing in the registries provided i.e. Gold Standard registry, UNEP Risoe CDM Pipeline. The DOE has also looked at the CMD registry and confirm that no project covering the same geographical area and implementing the same technology has been registered.
Findings	Compliant
Conclusion	Corresponding to the paragraph 363 of VVS for CDM PA version 01.0, the DOE can confirm that: - The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. - All parameters required by the monitoring plan have been sufficiently monitored and correctly listed. The monitored data for required parameters have been verified by checking the whole information flow.

E.6.2.2. Data and parameters monitored for Sustainable Development Indicators (SDIs)

Means of verification	**<u>SDI 1: Air quality</u>** Parameter monitored is the number of positive comments from stove users Target**: 100%** (as in the registered PDD) **MoV:** The DOE reviewed the monitoring and usage survey report (ref doc 3 Appendix 3) and monitoring and usage survey data (ref doc 15 Appendix 3); and further held interviews with 6 stove users who participated in the Usage and Monitoring survey, during site visit (refer to section D.4 above). The result shows the parameter achieved 100%. The DOE considers that the SDI has a positive score in this monitoring period. **<u>SDI 2: Quality of Employment</u>** Parameter monitored**:** Number of artisans trained and active over time Target: **60 artisans** (as in the registered PDD) **MoV:** The DOE carried out a site visit and reviewed training records including attendance lists and training reports (ref. doc 10 in Appendix 3). The results indicate the PP (205 artisans trained) was confirmed and has surpassed the target in the PDD. The DOE considers the SDI to have a positive score in this monitoring period. **<u>SDI 3: Livelihood of the poor</u>** Parameter monitored: Time and money savings per year due to reduced fuel consumption, and Number of people in savings and loaning groups.

	Target: **215 hrs** less per year spent on collecting firewood, and/or **KES 5486** less per year spent on firewood and **300** CSL groups established with **4,500** persons **MoV:** The DOE reviewed the monitoring and usage survey report (ref doc 3 Appendix 3) monitoring and usage survey data (ref doc 4 Appendix 3), CLS database (refer to doc 16 in Appendix 3) and corresponding summary sheet (refer to doc 17 in Appendix 3). The DOE held interviews with 8 stove users, who participated in the Usage and Monitoring survey, during site visit. From this assessment the DOE confirms that PP reported figures (i.e. 8,616 KSh as amount of money saved and 280 hours' time saved per year respectively, and 51,097 people in the savings and loaning scheme). The DOE considers that this SDI has a positive score in this monitoring period. **SDI 4: Access to affordable and clean energy services** Parameter monitored: Number of households using efficient cook stoves Target: **41,700** cook stoves are constructed by the end of the monitoring period **MoV:** Review of sales records (ref to assessment of parameter 4 in section E.6.2.1 above). The results indicate that cumulatively 51,097(48593 stoves assuming a usage rate of 95.1% for this monitoring period) stove have been implemented since the start of the project. From the results, the PP had surpassed the target. The DOE considers that indicator has a positive score in this monitoring period. **SDI 5: Human/institutional capacity** Parameter monitored: Number of women trained and Number of people reached through awareness creation on efficient cook stoves and climate change. Target: **3,000** trained in savings and loan scheme**, 9** animators trained**, 4500** people reached **MoV:** The DOE carried out a site visit and reviewed records from training including attendance lists, list of awareness creation activities and a sample of two reports for the activities (ref doc 11 in Appendix 3). In this monitoring period the PP achieved the following figures which have been verified: 45,688 women trained for saving and loaning groups, 82 animators trained, and 2,033 people reached through awareness creation on efficient cook stoves and climate change. The DOE considers that this SDI has a positive score in this monitoring period. **SDI 6: Quantitative employment and income generation** Parameter monitored: Number of people receiving income from project activity Target: **75 persons (15 staff and 60 artisans)** **MoV:** The DOE reviewed list of people receiving income from the project activity and also held interviews with the PP's representative. It was indicated that the number of staff employed by the project activity was 18; 79 artisans and 60 animators receive income from the project activity. The DOE considers that this SDI has a positive score in this monitoring period.
Findings	Compliant
Conclusion	Corresponding to the paragraph 363 of VVS for CDM PA version 01.0, the DOE can confirm that: - The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. - All parameters required by the monitoring plan have been sufficiently monitored and correctly listed. The monitored data for required parameters have been verified by checking the whole information flow.

E.6.3. Implementation of sampling plan

Means of verification	**Document review** The following documents were reviewed: monitoring manual (ref doc 7 Appendix 3), monitoring and usage survey report (ref doc 3 Appendix 3) and monitoring and usage survey data (ref doc 15 Appendix 3). The DOE further assessed the survey procedures, sampling method, data entry and analysis. The DOE applied acceptance sampling as described in section D.4 above to verify the PP's

	implementation of the sampling plan described the registered PDD and monitoring manual. **Site visit** Interviews with PP's representative, monitoring team (including enumerators) and a sample of respondents to the monitoring and usage survey were held during site visit.
Findings	Compliant
Conclusion	The DOE confirms that, for the parameter monitored and determined through sampling (refer to section E.6.2 above), the sampling efforts and surveys comply with the validated sampling plan in the registered PDD and also in the monitoring manual.

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Document review: The following documents were reviewed: Monitoring report (refer to doc 1 in Appendix 3), registered PDD (refer to doc 6 in Appendix 3), previous verification report (refer to doc 13 in Appendix 3)
Findings	The project activity does not involve direct measurement of parameters using measuring equipment. Measuring equipment are used when carrying out Field Performance Test (FTs). In 2017, a PFT was carried out and the results were verified during this verification cycle and deemed acceptable by the verification team. .
Conclusion	Records of calibration (refer to doc 18 in appendix 3) conducted during performance of PFT in 2017 were submitted by the PP to the verification team. They were reviewed and found satisfactory.

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	**Document review** The following documents were reviewed: applied methodology (ref doc 14 Appendix 3), registered PDD (ref doc 6 Appendix 3), monitoring report (ref doc 1 Appendix 3) and ER calculation spreadsheet (ref doc 2 Appendix 3)
Findings	Compliant
Conclusion	Baseline emissions calculations are integrated in emissions reduction calculation formula

E.8.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	**Document review** The following document were reviewed: applied methodology (ref doc 14 Appendix 3), registered PDD (ref doc 6 Appendix 3), monitoring report (ref doc 1 Appendix 3) and ER calculation spreadsheet (ref doc 2 Appendix 3)
Findings	Compliant
Conclusion	Project emissions calculations are integrated in emissions reduction calculation formula

E.8.3. Calculation of leakage GHG emissions

Means of verification	**Document review** The following document were reviewed: applied methodology (ref doc 14 Appendix 3), registered PDD (ref doc 6 Appendix 3), monitoring report (ref doc 1 Appendix 3) and ER calculation spreadsheet (ref doc 2 Appendix 3) and monitoring and usage survey report (ref doc 3 Appendix 3)
Findings	Compliant
Conclusion	No leakage

E.8.4. Summary of calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of	**Document review**

<table>
<tr><td>verification</td><td>The review involved crosschecking the values of the parameters used in ER calculations with the referenced sources. The following document were reviewed: applied methodology (ref doc 14 Appendix 3), registered PDD (ref doc 6 Appendix 3), monitoring report (ref doc 1 Appendix 3), ER calculation spreadsheet (ref doc 2 Appendix 3), Previous verification report (ref doc 13 Appendix 3)</td></tr>
<tr><td>Findings</td><td>Compliant</td></tr>
<tr><td>Conclusion</td><td>The details for emission reductions calculation during the monitoring period from 01/01/2017 to 31/12/2017 are provided in the ER calculation spreadsheet (ref doc 2 Appendix 3).

The PP calculated emission reductions by first determining the number of project technology days ($\Sigma_{b,y}\ N_{p,y}$),usage rate, fuel savings in t wood/day-stove, converted the emission factors $EF_{fuel,CO2}$ and $EF_{fuel,\ nonCO2}$ into appropriate units i.e. tCO2e/t wood and then took a product of all these values including the $f_{NRB,b,y}$ and finally subtracting leakage as follows:
$ERy = (\Sigma_{,y}\ N_{p,y}) * U_{p,y} * P_y * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,\ nonCO2}) - \Sigma\ LE_Y$
Where:
<table>
<tr><td>Parameter</td><td>Value</td><td>Source of value</td></tr>
<tr><td>$\Sigma_{,y}\ N_{PY}$</td><td>Project Technology Days = 17,408,464 days in year 2017</td><td>Tembea Project Database 2017</td></tr>
<tr><td>U_{PY}</td><td>Cumulative Usage Rate = 0.951</td><td>Usage/Monitoring Survey 2017</td></tr>
<tr><td>P_Y</td><td>Fuel Savings = 0.0038 t wood/day-stove</td><td>calculated from PFT 2017</td></tr>
<tr><td>$f_{NRB,b,y}$</td><td>Non-renewable biomass fraction = 92.00%</td><td>CDM default value for Kenya</td></tr>
<tr><td>$EF_{wood,\ CO2}$</td><td>Emission Factor = 1.7472 tCO_2e/t wood</td><td>IPCC 2006 default</td></tr>
<tr><td>$EF_{wood,\ nonCO2}$</td><td>Emission Factor = 0.1356 tCO_2e/t wood</td><td>IPCC 2006 default (CH_4 + N_2O)</td></tr>
<tr><td>$\Sigma\ LE_Y$</td><td>Leakage LE = 0 tCO_2e/t year</td><td>Assumption (monitoring survey)</td></tr>
</table>
The DOE confirms that the approach is the same as provided in the methodology i.e.
$ER_y = \Sigma_{b,p}(N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,\ fuel} * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,nonCO2})) - \Sigma LE_{p,y}$

The DOE confirms:
(a) All data was available for this monitoring period
(b) Crosschecks have been done on the values used in ER calculation with their respective sources of data (refer to section E.6.2 above).
(c) Appropriate methods and formulae for calculating GHG emission reductions have been followed;
(d) Assumptions, emission factors and default values that have been applied in the calculations have been justified;
(e) A pro-rata approach was correctly applied to the calculations of GHG emission reductions;
(f) The first day in which CERs are being claimed has been correctly specified.</td></tr>
</table>

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	**Document review** The following document were reviewed: registered PDD (ref doc 6 Appendix 3) and monitoring report (ref doc 1 Appendix 3)
Findings	Compliant
Conclusion	The total estimated ex ante emission reductions for this monitoring period according to the PDD is 86,633 tCO2e. The corresponding actual emission reduction in the monitoring period as reported in the monitoring report and verified by the DOE is 109,698 tCO2e, over the 1 year monitoring period. This indicates that the project achieved approximately 27.2% more ERs than projected in the registered PDD.

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	**Document review** The following document were reviewed: registered PDD (ref doc 6 Appendix 3) and monitoring report (ref doc 1 Appendix 3)
Findings	Compliant
Conclusion	The DOE considers the reason, provided for the difference in the actual ERs achieved and the estimates in the PDD, to be justifiable. The variation is due to more stoves installed in the year 2017, than projected in the PDD.

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	**Document review** The following document were reviewed: registered PDD (ref doc 6 Appendix 3) and monitoring report (ref doc 1 Appendix 3)
Findings	Compliant
Conclusion	All emission reductions claimed in this monitoring period fall under the period 1 January 2013 onwards. Relevant GWPs for the period were used.

SECTION F. Internal quality control

The verification report underwent an Internal Technical Review (ITR) before requesting issuance of VERs for the project activity. The ITR is an independent process performed to examine thoroughly that the process of verification has been carried out in conformance with the requirements of the verification scheme as well as internal Bureau Veritas India Pvt. Ltd. (BVI) procedures.

The Team Leader provides a copy of the verification report to the reviewer, including any necessary verification documentation. The reviewer reviews the submitted documentation for conformance with the verification scheme. This will be a comprehensive review of all documentation generated during the verification process.

When performing an Internal Technical Review, the reviewer ensures that:
- The verification activity has been performed by the team, by exercising utmost diligence and complete adherence to the CDM rules and requirements, as well as requirements for Voluntary Offset Projects under the Gold Standard, including the applied Gold Standard methodology.
- The review encompasses all aspects related to the project which includes: project design, baseline, monitoring plan and emission reduction calculations, internal quality assurance systems of the project participant, as well as the project activity, closure of CARs, CLs and FARs during the verification exercise, and review of sample documents.

The reviewer may raise Clarification Requests to the verification team and discusses these matters with Team Leader. After the agreement of the responses on the Clarification Requests from the verification team as well as the PP, the finalized verification report is accepted for further processing such as final approval, submission to the PP or uploading via the GS registry.

SECTION G. Verification opinion

Bureau Veritas India Pvt. Ltd. (BVI) (the DOE) has performed the 6th periodic verification of the project “Energy Efficient Cook Stoves for Siaya Communities, Kenya”; Gold Standard registration reference number GS 879. The project is developed by Tembea Youth Centre for Sustainable Development, which is located in Siaya County, Kenya. The project is applying the Gold Standard methodology “Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011)”.

The verification was based on:
a) Requirements for Voluntary Offset Projects under the Gold Standard, including the applied Gold Standard methodology. The Gold Standard requirements are stipulated in the GS Requirements– version 2.2 and The Gold Standard Toolkit version 2.2, and

b) UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The management of Tembea Youth Centre for Sustainable Development (Kenya) and MyClimate Foundation (Switzerland) are responsible for the preparation of the GHG emissions data and the reported GHG emission reductions of the Project on the basis set out within the monitoring plan contained in the revised approved PDD. The development and maintenance of records and reporting procedures, in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas India Pvt. Ltd. (BVI) has verified the project Monitoring Report version 2.1 dated 29/01/2018 for the reporting period 01/01/2017 to 31/12/2017 (both days included). Bureau Veritas India Pvt. Ltd. (BVI) confirms that the project is implemented as described in the validated and registered project design documents. Installed equipment (efficient cook stoves) being essential for generating emission reductions run reliably. The monitoring system is in place and the Project is generating GHG emission reductions as a Gold Standard VER project.

Bureau Veritas India Pvt. Ltd. (BVI) can confirm that the GHG emission reductions are calculated without material misstatements and that the project activity continues have a positive impact on the development of the community in which it is implemented. Our opinion relates to the project's GHG emissions, resulting GHG emission reductions, the validated and registered project baseline, approved monitoring plan and its associated documents. Based on the evidence and information that is considered necessary to guarantee that GHG emission reductions are appropriately calculated, and sustainable development indicators are monitored and reported; Bureau Veritas India Pvt. Ltd. (BVI) confirms the following statement:

Reporting period:	01/01/2017 to 31/12/2017 (both days included)
Baseline emissions:	Integrated in ER calculation formula
Project emissions:	Integrated in ER calculation formula
Leakage emissions:	0 t CO_2 equivalents
Emission Reductions:	109,698 t CO_2 equivalents

SECTION H. Certification statement

Bureau Veritas India Pvt. Ltd. (BVI) (the DOE) has performed the 6th periodic verification of the project "Energy Efficient Cook Stoves for Siaya Communities, Kenya"; Gold Standard registration reference number GS 879. The project is developed by Tembea Youth Centre for Sustainable Development, which is located in Siaya County, Kenya. The project is applying the Gold Standard methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011)". The verification was based on:
a) Requirements for Voluntary Offset Projects under the Gold Standard, including the applied Gold Standard methodology. The Gold Standard requirements are stipulated in the GS Requirements– version 2.2 and The Gold Standard Toolkit version 2.2, and
b) UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The verification consisted of the following three phases:
i) Desk review of the project design, the baseline and monitoring plan;
ii) Follow-up interviews with project stakeholders;
iii) Resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of Tembea Youth Centre for Sustainable Development (Kenya) and MyClimate Foundation (Switzerland) are responsible for the preparation of the GHG emissions data and the reported GHG emission reductions of the Project on the basis set out within the monitoring plan contained in the revised approved PDD. The development and maintenance of records and reporting procedures, in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas India Pvt. Ltd. (BVI) has verified the project Monitoring Report version 2.1 dated 29/01/2018 for the reporting period 01/01/2017 to 31/12/2017 (both days included). Bureau Veritas India Pvt. Ltd. (BVI) confirms that the project is implemented as described in the validated and registered project design documents. Installed equipment (efficient cook stoves) being essential for generating emission reductions run reliably. The monitoring system is in place and the Project is generating GHG emission reductions as a Gold Standard VER project.

Bureau Veritas India Pvt. Ltd. (BVI) can confirm that the GHG emission reductions are calculated without material misstatements. Our opinion relates to the project's GHG emissions, resulting GHG emission reductions, the validated and registered project baseline, approved monitoring plan and its associated documents.

Bureau Veritas India Pvt. Ltd. (BVI) can confirm that the GHG emission reductions are calculated without material misstatements and that the project activity continues have a positive impact on the development of the community in which it is implemented. Our opinion relates to the project's GHG emissions, resulting GHG emission reductions, the validated and registered project baseline, approved monitoring plan and its associated documents.

Based on the evidence and information that is considered necessary to guarantee that GHG emission reductions are appropriately calculated, and sustainable development indicators are monitored and reported; Bureau Veritas India Pvt. Ltd. (BVI) confirms the following statement:

Reporting period:	01/01/2017 to 31/12/2017 (both days included)
Baseline emissions:	Integrated in ER calculation formula
Project emissions:	Integrated in ER calculation formula
Leakage emissions:	0 t CO_2 equivalents
Emission Reductions:	109,698 t CO_2 equivalents

Mr. James Chirchir
Team Leader
27/02/2018

Mr. Samuel Mayieko
Internal Technical Reviewer
27/02/2018

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
EB	CDM Executive Board
FAR	Forward Action Request
FT	Field Performance Test
GHG	Green House Gas(es)
GS	Gold Standard
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PP	Project Participant
SD	Sustainable Development Indicator
TYCS	Tembea Youth Centre For Sustainable Development
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reductions
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Lead Verifier – James Chirchir

He holds a Bachelor's degree in Chemical and Process Engineering and had 4 years' experience in manufacturing before joining Bureau Veritas. He is Lead Auditor in ISO 9001:2015 and ISO 14001:2015 and a trained CDM Verifier. He has conducted at least 5 CDM projects as validator/verifier. He has been involved in the verification of the following GS projects GS 879, GS 477 and GS 464. He is a resident of Kenya, the host country where the project is implemented.

Internal Reviewer – Samuel Mayieko

He has a degree in Physics with over 9 years of experience in renewable energy, energy efficiency and climate change, out of which 6 years have been in CDM. He has been trained on CDM verification, QMS (ISO 9001) and EMS (ISO 14001), as Lead auditor. He has been involved in validation and verification of CDM and Gold Standard projects covering sectoral scope 1 and 3. Some of the GS projects he has been involved in included: Previous cycles of verification of GS 879, verification of GS 477, verification of GS 464 and verification of GS 2457. He is a resident of Kenya, the host country where the project is implemented.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Tobias Hoeck/Job Orina/Jared Buoga	Monitoring report, version 02	19/01/2018	PP
2	Tobias Hoeck/Job Orina/Jared Buoga	Database and ER calculation	20/11/2017	PP
3	Tobias Hoeck/Job Orina/Jared Buoga	Monitoring/Usage Survey 2017 Report	20/11/2017	PP
4	Gold Standard	GS879 Issuance Review Round Final	19/10/2016	PP
5	Job Orina	Email communication between PP and GS	06/01/2017	PP
6	Tobias Hoeck/Job Orina/Jared Buoga	Registered PDD version 3.2	10/07/2012	PP
7	Tobias Hoeck/Job Orina/Jared Buoga	Monitoring Manual Version 02	29/08/2012	PP
8	Tobias Hoeck/Job Orina/Jared Buoga	Monitoring Report version 2.1	29/01/2018	PP
9	Michael Ekadel (ESINYEN & ASSOCIATS CPA (K). P.O. BOX 10117-00100 NAIROBI, TEL: 072291474/0786716709)	Tembea Financial audit report	05/02/2018	PP
10	Tembea Youth Centre for Sustainable Development	Report on training done in South Alego location, between 2-12th May 2017	12/05/2017	PP
		Report on training done in East Alego location, between 5-14th September 2017	14/09/2017	PP
11	Tembea Youth Centre For Sustainable Development	Employment records, 2017	2017	PP
12	Tobias Hoeck/Job Orina/Jared Buoga	Monitoring report (5th verification cycle)	2016	DOE
13	Bureau Veritas India Pvt. Ltd. (BVI)Bureau Veritas India Pvt. Ltd. (BVI)	Verification report version 1.1 (5th verification cycle)	23/03/2017	DOE
14	GS	Technologies and Practices to Displace Decentralized Thermal Energy Consumption	11/04/2011	PP
15	Tobias Hoeck/Job Orina/Jared Buoga	Monitoring Usage Survey analysis_V01	22/11/2017	PP
16	Tembea Youth Centre For Sustainable Development	CSL summary_V01	27/11/2017	PP
17	Tembea Youth Centre For Sustainable Development	Sales receipts numbers; 46086, 50391, 49538, 47340, 50506, 47271, 45689, and 46518	2017	PP
18	Job Orina/Jared Buoga	Calibration records		PP
19	Tobias Hoeck/Job Orina/Jared Buoga	PFT Update 2017 Analysis V02	23/07/2017	PP
20	Tobias Hoeck/Job Orina/Jared Buoga	Project FT update report 2017, V01	August 2017	PP
21	UNFCCC	VVS for CDM project activity, V01.0	EB 93 annex 5	CDM UNFCCC
22	UNFCCC	PS for CDM project activity, V01.0	EB 93 annex 4	CDM UNFCCC
23	Job Orina	170218_FAR list_	Ver 1	PP

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

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

FAR ID	01	**Section no.**	E.2	**Date:** 20/03/2017
Description of FAR				
As part of the next monitoring the PP shall provide evidence of unique users of 1320 duplicate data stoves for instance it shall provide names of women in polygamous families, names or pictures of end users using mobile number and address of relatives or friends to ensure uniqueness and verifiability of data. In case PP is unable to provide user data as requested then equivalent VER shall be deducted from the next verification for both this and next monitoring period.				
Project participant response				**Date:** 20/03/2017
We have complied with the FAR and as such list of the unique stove user has been worked. In the list we have separated stove owner from stove user. Consider the list submitted				
Documentation provided by project participant				
171208_FAR list.xls				
DOE assessment				**Date:** 11/01/2018
The verification team has assessed the list of the 1320 duplicate data and has included details of stoves users to keep the stoves uniquely identifiable as per users. During the verification site visit, the verification team was able to visit 11 homes where issues of duplicate stoves had been addressed. The DOE deems the FAR sufficiently addressed.				

Table 2. CL from this verification

CL ID	CL 01	**Section no.**	Part 1	**Date:** 08/01/2018
Description of CL				
It is not clear to the verification team if the date and version of the monitoring report is 19/05/2017 and version 3 respectively. Please clarify				
Project participant response				**Date:** 08/01/2018
It has been corrected to version 2 of 09/01/2018				
Documentation provided by project participant				
Revised monitoring report				
DOE assessment				**Date:** 11/01/2018
The Monitoring report had been reviewed and the version and date of the report is clearly stated. CL 01 is closed out.				

Table 3. CAR from this verification

CAR ID	CAR 01	**Section no.**	A.1	**Date:** 08/01/2018
Description of CAR				
The information provided as summary (Pg 16) of the MR contains values inconsistent with other sections of the MR .Please revise accordingly				
Project participant response				**Date:** 08/01/2018
The details have been corrected				
Documentation provided by project participant				
Revised Monitoring Report(Version 2)				
DOE assessment				**Date:** 11/01/2018
The corrections on the revised MR have been reviewed and found OK. CAR 01 is closed out.				

CL ID	CAR 02	**Section no.**	D.2	**Date:** 08/01/2018
Description of CAR				
The number of stoves provided as installed (44156) in inconsistent with other sections of the report which provides the number of installed stoves as 51097. The total sum of the number of stoves installed in section D.2 of the MR is 51,096, hence the value provided as 51,097 is incorrect.				
Project participant response				**Date:** 08/01/2018
The section has been corrected to 51,097 which is the correct figure from the database				
Documentation provided by project participant				

Revised Monitoring Report(Version 2)	
DOE assessment	**Date:** 11/01/2018
The corrections on the revised MR have been reviewed and found OK. CAR 02 is closed out.	

Table 4. FAR from this verification

FAR ID	xx	**Section No.**		**Date:** DD/MM/YYYY
Description of FAR				
N/A				
Project participant response				**Date:** DD/MM/YYYY
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				**Date:** DD/MM/YYYY
N/A				

Appendix 5. Samples verified

Samples for Risk 1

Receipts no. : 46086, 50391, 49538, 47340, 50506, 47271, 45689, 46518

Samples for Risk 2 – Monitoring and usage survey

Questio-nnaire #	Interviewer	Survey Date	Respondent	Gender	Location	Stove ID	Comment
44	Linda Achieng	10/23/2017	Jecinta Anyango	Female	Masinde	TEMBEA11/0561	Confirmed participation in survey. All questions entered correctly in database
268268268	Judith Ogutu	10/27/2017	Janet Awuor	Female	Komenya Kalaka	TEMBEA16/37277	Confirmed participation in survey. All questions entered correctly in database
223	Daniel Abongo	10/26/2017	Zachaeus Ombaka	Male	Kochieng' A	TEMBEA15/31343	Confirmed participation in survey. All questions entered correctly in database
158	Emily Atieno	10/25/2017	Mary Otieno	Female	Kathieno A	TEMBEA14/16191	Confirmed participation in survey. All questions entered correctly in database
186	Nicholas Ngesa	10/26/2017	Concrelus Okongo	Male	Sigomere	TEMBEA14/20723	Confirmed participation in survey. All questions entered correctly in database
159	Emily Atieno	10/25/2017	Shadrack Ochieng	Male	Kathieno A	TEMBEA14/16262	Confirmed participation in survey. All questions entered correctly in database
194	Judith Ogutu	10/26/2017	Merily Akinyi	Female	Nyangera Village	TEMBEA10/0037	Confirmed participation in survey. All questions entered correctly in database
265	Robert Odallo	10/27/2017	Beatrice Aoko Otieno	Female	Sigul Village	TEMBEA10/0163	Confirmed participation in survey. All questions entered correctly in database

Samples for Risk 3 – Single user/ same location multiples stoves

Year of Sale	Stove owner	Monitoring Region	Monitoring Sector	GPS coordinates of household: Latitude	GPS coordinates of household: Longitude	Stove identification number	Comment/Stove user
2007	**Wilfridah Anyango**	**Ligala**	**U1**	**00 15.100**	**034 15.102**	**TEMBEA11/1777**	**Wilfridah Anyango**

2007	Wilfridah Anyango	Ligala	U1	00 15.100	034 15.102	TEMBEA11/3406	John Agiye
2007	Wilfridah Anyango	Ligala	U1	00 15.100	034 15.102	TEMBEA11/3770	Roselyne Akinyi
2007	Wilfridah Anyango	Ligala	U1	00 15.100	034 15.102	TEMBEA11/4376	Patrick Sewe
2007	Wilfrida Apondi	Sihay	U1	00 14.567	034 16.468	TEMBEA11/2364	Wilfrida Apondi
2007	Wilfrida Apondi	Sihay	U1	00 14.567	034 16.468	TEMBEA11/4520	Mary Akoth Wadanda
2007	Wilfrida Akinyi Ombambo	Nyamsenda	U1	00 16.496	034 14.596	TEMBEA11/1952	Wilfrida Akinyi Ombambo
2007	Wilfrida Akinyi Ombambo	Nyamsenda	U1	00 16.496	034 14.596	TEMBEA11/3581	Janet Adhiambo Ombambo
2011	Agnes Awuor	Kochieng' A	U3	00 05.246	034 13.459	TEMBEA15/28528	Agnes Awuor
2011	Agnes Awuor	Kochieng' A	U3	00 05.127	034 13.814	TEMBEA15/28660	Elizabeth Ochieng
2009	Alice Adhiambo	Kagonya	U1	00 15.445	034 12.424	TEMBEA13/11530	Alice Adhiambo
2009	Alice Adhiambo	Kagonya	U1	00 15.445	034 12.424	TEMBEA13/11549	Sarah Atieno Otieno
2007	Alice Apondi Mugenya	Nyamsenda	U1	00 15.970	034 14.276	TEMBEA11/1741	Alice Apondi Mugenya
2007	Alice Apondi Mugenya	Nyamsenda	U1	00 15.970	034 14.276	TEMBEA11/3370	Fred Ochieng

2007	**Alice Apondi Mugenya**	**Nyamsenda**	**U1**	**00 15.970**	**034 14.276**	**TEMBEA11/4340**	**Alice Wanga**
2007	**Alice Apondi Owino**	**Nyamsenda**	**U1**	**00 16.590**	**034 14.555**	**TEMBEA11/1784**	**Alice Apondi Owino**
2007	**Alice Apondi Owino**	**Nyamsenda**	**U1**	**00 16.590**	**034 14.555**	**TEMBEA11/3413**	**Damaris Aketch Odhiambo**
2007	**Alice Apondi Owino**	**Nyamsenda**	**U1**	**00 16.590**	**034 14.555**	**TEMBEA11/3777**	**Jenipher Atieno Ongweso**
2007	**Alice Apondi Owino**	**Nyamsenda**	**U1**	**00 16.590**	**034 14.555**	**TEMBEA11/4383**	**Patricai Okinyo Msumba**
2010	**Edwin Okoth**	**Kathieno C**	**U1**	**00 16.802**	**034 23.445**	**TEMBEA14/16451**	Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other
2010	**James Oloo**	**Kathieno C**	**U1**			**TEMBEA14/16452**	
2010	**Opondo Ooko**	**Kathieno A**	**U1**	**00 16.803**	**034 19.552**	**TEMBEA14/16178**	Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other
2010	**Yvone Akinyi**	**Kathieno A**	**U1**			**TEMBEA14/16179**	
2009	**Jennifer Ogolla**	**Nyalenya**	**U1**	**00 16.809**	**034 10.177**	**TEMBEA13/11281**	Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other
2009	**Syprose Achieng**	**Nyalenya**	**U1**			**TEMBEA13/11282**	
2009	**Florence Anyango**	**Ligingo**	**U1**			**TEMBEA13/11748**	

2009	**Eunice Atieno Amollo**	**Ligingo**	**U1**			**TEMBEA13/11749**	
2009	**Emmaculate Akinyi**	**Ogero**	**U1**	**00 16.809**	**034 13.332**	**TEMBEA13/11434**	Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other
2009	**LydiaOduor**	**Ogero**	**U1**			**TEMBEA13/11435**	
2007	**Juliana Gati**	**Nyamsenda**	**U1**	**00 16.810**	**034 15.821**	**TEMBEA11/1086**	Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other
2007	**Margaret Opondo**	**Ligala**	**U1**			**TEMBEA11/4189**	
2017	**Magdaline Athieno Odero**	**Bar Olengo**	**U3**	**00 00.039**	**034 12.843**	**TEMBEA17/44285**	**Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other**
2017	**Anjelina Buom Akumu**	**Bar Olengo**	**U3**			**TEMBEA17/47704**	
2017	**Fredrick Oloo**	**Bar Osimbo**	**U3**		**034 16.688**	**TEMBEA17/45078**	**Stove User and owner is the same. Stoves not in the same location but homesteads are nearby each other**
2017	**Margret Aoko Onyango**	**Bar Osimbo**	**U3**	**00 00.125**		**TEMBEA17/47486**	
2017	**Clementina Achieng Abobo**	**Bar Osimbo**	**U3**	**00 00.125**	**034 16.785**	**TEMBEA17/45079**	**Clementina Achieng Abobo**
2017	**Yvonne Adhiambo Adede**	**Bar Osimbo**	**U3**			**TEMBEA17/47487**	**Yvonne Adhiambo Adede**

- - - -

Document information

Version	*Date*	*Description*
01.0	23 March 2015	Initial publication.

Decision Class: Regulatory
Document Type: Form
Business Function: Issuance
Keywords: project activities, verifying and certifying