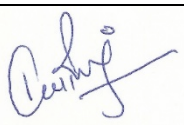
Verification and certification report form for CDM programme of activities

(version 01.0)

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

VERICATION AND CERTIFICATION REPORT		
Title of the programme of activities (PoA)	Improved Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento"	
UNFCCC reference number of the PoA	PoA 9176	
Version number(s) of the PoA-DD(s) applicable to this report	5	
Version number of the verification and certification report	03	
Completion date of the verification and certification report	17/03/2017	
Monitoring period number	Monitoring period: 01	
Duration of this monitoring period	15/06/2015 – 14/06/2016	
Number and version number of the monitoring report to which this report applies	Number 1, version number of MR – 3.0	
Coordinating/managing entity (CME)	Envirofit International Ltd.	
Host Party(ies)	Host Party(ies) of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)
	Honduras	Yes
Sectoral scope(s)	Sectoral scope: 3: Energy demand	
Selected methodology(ies)	AMS-II.G ver 6.0: Energy efficiency measures in thermal applications of non-renewable biomass	
Selected standardized baseline(s)	Not applicable	
Total estimated GHG emission reductions or net GHG removals for this monitoring period in the included CPA(s) covered in this report	42,222	
Total certified GHG emission reductions or net GHG removals for this monitoring period for the included CPA(s) covered in this report	38,179	
Name of DOE	Earthood Services Private Limited	
Name, position and signature of the approver of the verification and certification report	 Dr. Kaviraj Singh, Managing Director	

SECTION A. Executive summary

The Programme of Activities (PoA) under verification involves distribution of improved cook stoves (ICS) in Honduras. The ICS are woody biomass based (woodfuel) griddle stoves which replace the inefficient baseline stoves. The ICSs applied in this PoA have been designed to match the traditional utensils and cooking habits of the target consumers in host country and are more efficient in transferring heat from the fuel to the pot when compared to the stoves typically being used in the baseline.

The coordinating and managing entity (CME) of the PoA is Envirofit International Ltd (Envirofit). The Distributing Organization (DO) for the implementation of component project activity (CPA) is Fundación para el Desarrollo Integral de Honduras(FUNDEIH) for ICS distribution.

The households (majorly rural and semi-urban) where the PoA implementation has taken place used inefficient traditional stoves in the baseline. The PoA replaced the baseline stoves with efficient ICS. The ICS combust the fuel (woodfuel) far more efficiently resulting in emission of much lesser GHG and particulate matter. Additionally, it enhances the flow of thermal energy to cooking pots reducing the fuel usage. Thus, the PoA reduced GHG emissions and improved livelihood prospects due to reduced expenses on fuel. This further results into improved health of women and children in the project households.

PoA under verification has 1 CPA; 9176 - 0001

Scope of verification:

The verification is an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification includes the implementation and operation of the PoA as set out in the registered PoA-DD & revised CPA-DD 9176 - 0001 in the monitoring period. The verification tests the data and assertions set out in the monitoring report based on the following:

The verification tests the data and assertions set out in the monitoring report prepared for this monitoring period by the CMEs and is based on the following:

(i) The approved methodology AMS II.G. version 06 “Energy efficiency measures in thermal applications of non-renewable biomass”
(ii) The registered PoA-DD & revised CPA-DD and monitoring plan
(iii) UNFCCC criteria referred to in the Kyoto Protocol criteria and the CDM modalities and procedures as agreed in the Bonn Agreement and the Marrakech Accords
(iv) The CDM Validation and Verification Standard (VVS)
(v) The CDM Project Standard (PS) and Project Cycle Procedure (PCP)
(vi) Relevant decisions, guidance and clarifications of the CMP and CDM Executive Board and any other information and references relevant to the project activity’s reported emission reductions

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

Verification Process:

The verification process is conducted as per internal CDM Quality Manual, which includes the following steps;

a) Contract with Envirofit International Ltd (Envirofit) and appointment of verification team and technical review team (refer Section B.1 and B.2 of this report)
b) Completeness check of Monitoring Report
c) Publication of Monitoring Report at UNFCCC website
d) Desk review (refer Section C.1 of this report) of Monitoring Report and corresponding ER sheet by verification team and planning of onsite audit (including sampling approach (refer Section C.4 of this report) to be applied)
e) On site audit (refer Section C.2 of this report) (physical implementation and interview with relevant stakeholders) by verification team consistent of Team Leader and all Technical Experts, as a minimum
f) Follow up activities e.g., interviews (refer Section C.3 of this report)
g) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft verification report (refer Section C.5 of this report)

h) Independent technical review (refer Section D of this report) of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet and evidences)
i) Reporting and closure of TR comments/findings (refer Section C.5 of this report) (CARs/CLs/FARs) and final approval for the decision made (refer Section E and F of this report).
j) Issuance of final verification report to contracted CME (or authorized representatives) and submission of request for issuance, as appropriate.

Verification Conclusion:
Based on the outcome of the verification process of the registered PoA "Improved Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento"" and its CPA 9176 - 0001 for the monitoring period 15/06/2015 – 14/06/2016 (including both dates) we confirm that the implementation of referenced registered PoA and CPA is complying with applicable CDM rules and regulations as stated in the Monitoring Report (final) 3.0 dated 15/03/2017. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodologies AMS II.G Version 06 and the monitoring plan contained in the registered PoA-DD and revised CPA DD.

Earthood Services Private Limited is able to certify that the emission reductions from the registered CDM PoA UN#9176 "Improved Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento"" in Honduras and its CPA 9176 - 0001 during the period 15/06/2015 – 14/06/2016 (including both days) amount to 38,179 tCO_2e. Therefore, this is being submitted for request for issuance, as per UNFCCC procedures.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader	IR	Deka	Nayan Jyoti	Central office	Y	Y	Y	Y
2.	Technical expert	IR	Deka	Nayan Jyoti	Central office	Y	Y	Y	Y
3.	Verifier	IR	Mahala	Deepika	Central Office	Y	N	N	Y
4.	Methodological Expert	IR	Gupta	Anshika	Central office	Y	N	N	Y
5.	Local expert	EI	Valladares	Katherine	Central office	Y	N	N	Y

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	EI	Chaudhary	Anu	Central Office
2.	Technical Expert to TR	IR	Gautam	Ashok	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

SECTION C. Means of verification

C.1. Desk review

The desk review involves:

- A review of the data and information presented to verify their completeness;

- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- A review of calculations and assumptions made in determining the GHG data and emission reductions;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

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

C.2. On-site inspection

Duration of on-site inspection: 07/12/2016 to 09/12/2016				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Physical site visit: Households visited (implementation of PoA)	Honduras	07/12/2016 to 09/12/2016	Nayan Jyoti Deka
2.	Review of information flows for generating, aggregating and reporting the monitoring parameters	Honduras	07/12/2016 to 09/12/2016	Nayan Jyoti Deka
3.	Cross check between information provided in the monitoring report and data from other sources such as project database, sales receipts etc;	Honduras	07/12/2016 to 09/12/2016	Nayan Jyoti Deka
4.	A check of the monitoring equipment including calibration performance and observations of monitoring practices against the applicable requirements	Honduras	07/12/2016 to 09/12/2016	Nayan Jyoti Deka
5.	Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters	Honduras	07/12/2016 to 09/12/2016	Nayan Jyoti Deka

C.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1.	Lohia	Rohit	Envirofit International	20/11/2016	Monitoring report, Sampling calculations, ER calculations,	Nayan Jyoti Deka
2	Larros	Paola	Envirofit Honduras	07/12/2016 to 09/12/2016	PoA implementation, sales database, record keeping	Nayan Jyoti Deka
3	Zelaya	Heizal Morizel	Envirofit Honduras	07/12/2016	Monitoring & record keeping, followup calls with ICS users	Nayan Jyoti Deka
4	Mouna	Josua	Envirofit Honduras	07/12/2016 to 09/12/2016	Monitoring, survey, training	Nayan Jyoti Deka
5	Collser	Eva	FUNDEIH	09/12/2016	PoA implementation, sales database	Nayan Jyoti Deka
6	Granados	Migual	Envirofit Honduras	07/12/2016	Description of overall PoA,	Nayan Jyoti Deka
7	Mendoza	Tomasa Carolina	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
8	Hernandez	Maria Nely	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
9	Gonzales	Gabina	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
10	Sanchez	Maria	ICS users	07/12/201	ICS usage	Nayan Jyoti Deka

		Santos		6 to 09/12/2016		
11	Gonzales	Virginio	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
12	Gomez	Santos Eustasia	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
13	Gonzales	Eucebio	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
14	Pineda	Pablo	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
15	Gonzales	Escolastica	ICS users	07/12/2016 to 09/12/2016	ICS usage	Nayan Jyoti Deka
16	Mauneio	Jhonathan	Village coordinator	07/12/2016 to 09/12/2016	ICS user identification& CPA implementation	Nayan Jyoti Deka
17	Yakelin	Wendi	Village coordinator	07/12/2016 to 09/12/2016	ICS user identification	Nayan Jyoti Deka

C.4. Sampling approach

A specific-case CPA level sampling plan in accordance with AMS-II.G. version 6.0 was carried out for the specific case CPA 9176-0001 covered in this monitoring period. The CME has applied Stratified Random Sampling in the CPA for different monitoring parameters as per registered PoA DD and revised CPA DD. 90/10 confidence precision was applied by CME in the sampling, since 90/10 confidence applies for annual monitoring which is appropriate given the length of the monitoring period for the CPA, which is one year. Thus, CME has followed annual monitoring criteria and exclusive sampling and monitoring exercises were carried out for the monitoring period. The monitoring period covered the period between 15/06/2015 – 14/06/2016 (including both days).

The detailed sampling approach undertaken by CME is duly explained under Section G.3 of monitoring report.

DOE's sampling approach:

DOE has considered para 31 (a) of "Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 5" for determining the sampling size to be visited by DOE.
As per para 31 of "Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 5*," A DOE may select a different sample size than the one indicated in paragraph 28, either by choosing a different value for the consumer risk and producer risk (e.g. 20% for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply:*

(a) The estimated volume of annual emission reductions of the project activity or the PoA being verified is equal to or less than 100,000 tCO2e; or

(b) The security conditions in the project region prevents inspection of many samples (e.g. conflict zones); or

(c) *The project activity or the PoA is located in a least developed country or a host Party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified*.

In case of the current verification, the estimated annual emission reduction of the PoA being verified is less than 100,000 tCO_2 thus meeting the requirement of para 31(a).

The verification team determined the sample size for acceptance sampling by evaluating the following, using its own professional judgment and guidance in the Standard 'Sampling and surveys for CDM project activities and programme of activities' version 05.0:

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

Considering the above input values, a sample size of 8 was required as per Table 1 in the referred Standard for each monitoring session. Accordingly, Acceptance number (c) thus determined for the sample size is 0.

Accordingly, the verification team has verified 9 samples of ICS for the CPA (taking one additional sample of ICS in order to meet minimum requirement of 8 samples) to verify the parameters $N_{y,i,a}$ (Number of project devices of type i and age a that are operating in year y), $\mu_{y,i}$ (number of days of utilization of the project device during the year 'y') during site visit and observed that the sampling survey results of the CME for all the ICSs checked were consistent with DOE's field survey results.

For other parameter viz. $\eta_{new,i,a}$ (Efficiency of the device of type i and age a being deployed as part of the project activity) the verification team has checked from the document/evidence i.e. WBT test sheets etc. submitted by the CME.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General		-	-
Compliance of the monitoring report with the monitoring report form	-	-	-
Remaining forward action requests from validation and/or previous verification	-	-	3
Specific-case CPA(s) considered for verification and covered in this report	-	-	-
Programme of activities	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	1	-
Post-registration changes	-	-	-
• Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))	-	-	-
• Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline	-	-	-
• Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA	-	-	-
• Types of changes specific to afforestation and reforestation activities	-	-	-
Component project activity(ies)	-	-	-
Compliance of the CPA implementation with the included CPA design document	1	-	-
Post-registration changes	-	-	-

• Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline	-	-	-
• Corrections	-	-	-
• Changes to the start date of the crediting period	-	-	-
• Inclusion of a monitoring plan to an included CPA-DD	-	-	-
• Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline	-	-	-
• Changes to the programme design of the included CPA-DD	-	-	-
• Types of changes specific to afforestation and reforestation component project activities	-	-	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	1	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	-	-	-
• Data and parameters monitored	-	-	-
• Implementation of sampling plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Assessment of data and calculation of emission reductions or net removals	-	1	
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	-	-	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-	-	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA	-	-	-
• Remarks on difference from estimated value in registered PDD	-	-	-
Others (please specify)	-	-	-
Total	1	3	3

SECTION D. Internal quality control

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

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

SECTION E. Verification opinion

Earthood Services Private Limited (ESPL), contracted by Envirofit International Ltd. (the CME for the PoA), has performed the first independent verification of the emission reductions for the registered CDM PoA 9176

"Improved Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento"" and its CPA 9176-0001 in Honduras for the first monitoring period 15/06/2015 – 14/06/2016 (both days included) as reported in the Monitoring Report (public) Version 1 dated 11/10/2016. The CME is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

This verification report is for the CPA (9176-0001), which was found included under the PoA as per the UNFCCC webpage at the end of the current monitoring period. A single monitoring report has been prepared by the CME for the same in which implementation of the referred CPA along with monitoring results is included.

ESPL confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. This verification report has been prepared using the latest available template specified by UNFCCC and complies with the instructions to follow as per para 406 and 407 of CDM VVS Version 9.

The verification activities were conducted in accordance with ESPL's CDM Quality Manual System as per the steps indicated under Section A of this report. The verification process has resulted in conclusion that the included CPA confirm to the registered PoA DD as well as comply with applicable CDM rules and regulations and in accordance with applied monitoring methodology, AMS II.G Version 06. There were 3 FARs raised during validation of PoA, which required further attention from the verification team and have been addressed during the current monitoring period.

As a result, it is confirmed that the emission reductions from the CDM PoA 9176 "Improved Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento"" are correctly reported in the Monitoring Report (final) Version 3.0 dated 15/03/2017 and corresponding ER sheets for the monitoring period 15/06/2015 – 14/06/2016 (including both days) amount as 38,179 tCO_2e. Therefore, this will be submitted as part of request for issuance as per CDM PCP Version 9.

SECTION F. Certification statement

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

In our opinion the GHG emissions reductions reported for the PoA for the monitoring period 15/06/2015 – 14/06/2016 are fairly stated in the Monitoring Report (final) Version 3.0 dated 15/03/2017.

ESPL, based on outcome of verification activities, certify in writing that, during the monitoring period 15/06/2015 – 14/06/2016 (including both days), the registered CDM PoA "Improved Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento"" and the included CDM CPA (9176-0001) in the registered CDM PoA achieved the verified amount of 38,179 tCO2e reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CPA.

The verified amount of emission reductions is stated below as per the CPA and as per commitment period;

	Emission Reductions (Amount) in this monitoring period (in tCO2e)	
CPA (included in this request)	**Up to 31/12/2012 (1st commitment period)**	**01/01/2013 onwards**
9176-0001	0	38,179

SECTION G. Verification findings - General

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

Means of verification	The monitoring report form used is CDM-PoA-MR-FORM version 1.0. The form used was appropriate and latest available. All the details were filled as per the MR filling guidelines of the CDM-PoA-MR-FORM/16/.
Findings	No findings
Conclusion	The verification team confirms the compliance of the monitoring report with the valid version of the CDM-PoA-MR-FORM and the instructions therein for filling out the CDM-PoA-MR-FORM.

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

There were 3 FARs from the PoA validation/02/ and inclusion of CPA/04/ which needed to be closed during the current monitoring period. The detailed assessment and closure of the FARs has been provided in Appendix 4 of this report.

G.3. Specific-case CPA(s) considered for verification and covered in this report

Reference number of the specific-case CPA included in the PoA as of the end of this monitoring period	Is the specific-case CPA considered for this verification? (yes/no)	Version number of the registered PoA-DD to which the specific-case CPA complies with	Confirmation that a request for issuance including the specific-case CPA has been published for the previous monitoring period (Y/N)
9176-0001	Yes	Version 05, Dated 16/01/2015	Not Applicable

SECTION H. Verification findings – Programme of activities

H.1. Compliance of the programme implementation with the registered programme design document

Means of verification

The registered PoA involves the promotion, distribution and sale of improved cook stoves (ICS) using woodfuel in Honduras. The implementation of the CPA (included in this request) is within the geographical boundary of the PoA DD i.e. Honduras. There is only one CPA included and implemented under the PoA at the end date of current monitoring period. The CME has contracted FUNDIEH for the dissemination of cook stoves under the CPA. FUNDEIH is the distribution organization (CPA implementer) for the CPA. The overall responsibility of implementation and operation of the PoA is with CME, which was also evident during the site visit. This was found to be consistent with PoA-DD/01/.

The type of ICS distributed under the CPA is of type/model HM5000 (woodfuel) which fulfils the design considerations mentioned in the registered PoA-DD/01/ and revised CPA-DD/03/. The monitored efficiency of the ICS is 28.00%(age 1), 27.21%(age 2) and 26.32 %(age 3). The average values of efficiencies for the cook stoves of each age group has been found to be as per the calculation provided in the ER sheet/09/ and cross checked of the inputs from the WBT records/18/.

Technical specifications of the ICS were verified through the details provided by supplier /33/, and found to be consistent with information given in monitoring report. The project ICS are wood fuel based improved cook stoves.

The verification team has confirmed that aggregate annual thermal energy savings from the number of ICS deployed under the current CPA remains under the threshold of 180 GWh. The annual thermal energy saving achieved in the current monitoring period is 158 GWh, which is also clearly depicted in the ER sheet/09/ by the PP. The total number of ICS deployed in each year is listed below year wise.

Year of Installation	Age of cookstove	Stove type and model	No. of cookstoves distributed
2013	Age 3	HM5000	4,388
2014	Age 2	HM5000	13,198
2015	Age 1	HM5000	10,338
Total			**27,924**

The verification team confirms that the quantity, specification and target group of the ICS is consistent with the PoA DD /01/ and respective revised CPA DD/40/. Further, based on the review of ICS distribution database in ER sheet/09/, physical observations and interview conducted during the site visit, the verification team found that:

- The CPA is implemented within the boundary of the PoA as described in the PoA-DD.

	• The CME is same as that mentioned in the PoA-DD • The implementation and operation of the project activity has been conducted in accordance with the description contained in the PoA-DD and included revised CPA-DD. • All physical features of the CPA proposed in the included revised CPA-DD are in place • The FUNDEIH (distribution organization/CPA implementer) has disseminated the cook stoves under the CPA as per the included revised CPA-DD/40/. The verification team has visited the households during site visit. It was observed that each ICS was assigned a unique identification number, which ensures that no double counting happens. The unique identification number on each ICS, personal information of ICS owners and sales date of ICS was cross checked with the Sales database in ER sheet/09/. The operation of the ICS was confirmed through interviews of owners/representatives (of ICS) during the site visit. The team confirms that the baseline stoves replaced in this PoA are not a part of any other PA or PoA under CDM or other voluntary schemes as the stoves are traditional three stone cook stoves with extremely low efficiency and as revealed by the interviews the baseline stoves were already possessed by the users. The emission reductions being claimed during this monitoring period are lesser than the estimated emission reductions in the included CPA-DD. The estimated CERs were 42,222 tCO_2e whereas achieved ERs are 38,179 tCO_2e. The verification team considers the project description of the project contained in the PoA-DD is complete and accurate. The PoA-DD complies with the relevant methodology, tools, forms and guidance at the time of PoA submission for registration. The monitoring report was compared and verified against the description provided in the PoA-DD and found to be correct
Findings	CAR#04 was raised and closed. Please refer appendix 4 for further details.
Conclusion	a) The verification team confirms that the physical features (technology/type of ICS) of the implementation were in accordance with the PoA DD. b) The actual operation is in line to revised CPA DD, which is further explained under Section I.1, J.1 and K.1 of this report. The installations in the CPA for the type of ICS were in compliance with the revised CPA-DD/40/. The actual CERs for CPA were lower for comparable monitoring period. No information with regard to data and variables was identified that may surpass the estimated quantity of ERs in the revised CPA DD/40/.

H.2. Implementation and operation of the management system

Means of verification	The CME representatives and monitoring team were interviewed by the team leader during the site visit. It was confirmed that the CME has organized an appropriate management and operational system for implementation, monitoring and reporting functions. Contracted distribution organization (FUNDEIH which is a NGO) have been assigned task to collect and archive data of ICS customers by the CME. CPA records maintained by the DO and CME were checked during the site visit to confirm that the management system is in place. Distribution database/35/ maintained by the CME was also checked to ensure that each stove has unique ID allotted and double counting is avoided. The products disseminated were having Unique stove ID punched on it which was found consistent with the information in the distribution database. For data survey, a monitoring team has been organized by the CME consisting of trained monitoring staff, who conducted the surveys and WBTs. The monitoring manager at the CME is responsible for QA/QC of the data, analysis and reporting into the monitoring report. QA/QC procedures were found being followed during the site visit. Scanned copies of carbon transfer forms/30/ and completed survey forms and WBT test reports /18/ are made available to the assessment team for verification of the information of users inserted in the database sheets. All the documents are also retained by the CPA implementer.
Findings	No finding was raised.

Conclusion	The verification team assessed the management systems in place to implement the monitoring of the PoA. This included the roles and responsibilities, data collection, transfer and aggregation procedures, data storage and archiving for the monitoring system. The roles and responsibilities data collection transfer and aggregation procedures, data storage and archiving for the monitoring system have been provided in the MR /07/. The verification team confirms that the monitoring management system of the PoA is in place with the responsibilities properly identified and established.

H.3. Post-registration changes

H.3.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Not Applicable

H.3.2. Corrections

Not Applicable

H.3.3. Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))

Not Applicable

H.3.4. Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline

Not Applicable

H.3.5. Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA

Not Applicable

H.3.6. Types of changes specific to afforestation and reforestation activities

Not Applicable

SECTION I. Verification findings – Component project activity(ies)

I.1. Compliance of the CPA implementation with the included CPA design document

Means of verification

CPA included in this monitoring period targets the promotion, distribution and sale of ICS (Improved Cook Stoves) i.e., HM 5000, only model of ICS implemented in this CPA.

Envirofit International Ltd. is the Coordinating and Managing Entity (CME) for the implementation of CPA. The CME coordinates and manages distribution organization i.e. FUNDEIH that is responsible for implementing the CPA.
The details of the CPA 9176-0001 are as follows:

CPA Ref. #	Description	Verified from the document
Inclusion date	15/06/2015	This has been verified from the CDM website/37/
Location / State	Geographical boundaries of Honduras	Geo coordinates(14°6′N 87°13′W) of the location mentioned in the MR have been verified from the online website itouchmap.com/38/
ICS Model	HM5000	The model and the

		technical specification have been verified from the manufacturer's specification provided by the CME/22,26,28/.
CPA Implementer/ Distribution Organization	FUNDEIH is the DO(Distribution entity/ CPA implementer)	Scanned copies of user details attached with monitoring survey questionnaire/19/ also have the name of FUNDEIH representative mentioned in it as the distributor which confirms the role of FUNDEIH. Contractual agreement/42/ signed between Envirofit and the DO also confirms the task assigned to the latter.
Total Quantity Sold / Disseminated	27,924	The value has been verified from the distribution database/35/
ICS sales start date	10/07/2013	It has been confirmed from the distribution database/35/ that the first cook stove was sold on 10/07/2013.
Estimated CERs (comparable period)	42,222	ER sheet/09/ provides a clear calculation of the estimated ER reduction for the current monitoring period.
Actual CERs	38,179	ER sheet/09/ provides a clear calculation of the achieved ER reduction for the current monitoring period. Each parameter used for the calculation has also been verified under section I.4.2 separately.

CPA (9176-0001)
The distribution of the improved cook stoves has been done by FUNDEIH (contracted by Envirofit as CPA implementer). Total cook stoves disseminated under the current monitoring period is 27,924. The number of cook stoves disseminated has been listed below age-wise:

Year of Installation	Age of cookstove	Stove type and model	No. of cookstoves distributed
2013	Age 3	HM5000	4,388
2014	Age 2	HM5000	13,198
2015	Age 1	HM5000	10,338
Total			**27,924**

Revised CPA-DD version 5.1 dated 11/01/2017 /40/ limits the number of operational ICS as 23,350 units each year (however, this limit is subject to the CPA remaining below the methodology threshold of 180GWh_{th} thermal energy savings per annum, page 17, footnote 9 of the revised CPA-DD).

Review of distribution database and monitoring results confirm that the

	methodology threshold has not been compromised. The calculation provided in the ER sheet/09/ has been checked by the verification team that the CPA is below the threshold of 180 GWh/year (thermal).
Findings	CAR#04 was raised and closed. Please refer appendix 4 for further details.
Conclusion	• The verification team is of the opinion that physical features of the CPA have been implemented in accordance with the revised CPA-DD. • No specific monitoring equipment had to be installed according to the monitoring plan. • It is also confirmed, through the physical site visit and review of the supporting documentation, that physical features of the component CPA have been implemented in accordance with the revised CPA-DD. • The CPA was also found to be completely operational in line with the revised CPA-DD. The information provided in the relevant sections of the monitoring report are appropriately describe the implementation and operational status of the PoA.

I.2. Post-registration changes

I.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

Not Applicable

I.2.2. Corrections

The CME has proposed few corrections to the registered CPA DD/03/. The corrections are briefed below:

a) Fundación para el Desarrollo Integral de Honduras (FUNDEIH) has been listed as the DO/distribution entity in the revised CPA DD version 5.1. The organization is responsible entity of the implementation of the CPA.
b) Operational and management plan have also been updated to include FUNDEIH as the CPA Implementer (DO).
c) Some minor editorial changes have been made to the revised CPA DD.

The detailed assessment of the corrections has been done in the PRC Validation report. As per the Appendix 1 of PS/12/, the correction is exempted from prior approval. Therefore, the PRC Validation report/41/ and the revised CPA DD version 05.1/40/ will be submitted along the verification report.

I.2.3. Changes to the start date of the crediting period

Not Applicable

I.2.4. Inclusion of a monitoring plan to an included CPA-DD

Not Applicable

I.2.5. Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline

Not Applicable

I.2.6. Changes to the programme design of the included CPA-DD

Not Applicable

I.2.7. Types of changes specific to afforestation and reforestation component project activities

Not Applicable

I.3. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	The monitoring plan as contained in the revised CPA DD/40/ was reviewed against the monitoring requirements of the applied methodology/5/ as well as PoA DD/01/ with reference to the technology involved. Based on this review it was found that the monitoring plan contained in the revised CPA DD/40/ includes all the required

	parameters to be monitored in the context of the CPA design and description and allows proper determination of emission reductions in accordance with PoA DD/1/ and applied methodology /5/.
Findings	None
Conclusion	The monitoring plan is in accordance with the approved methodology/5/ that is included in the revised CPA DD.

I.4. Compliance of monitoring activities with the registered monitoring plan

I.4.1. Data and parameters fixed ex ante or at renewal of crediting period

I.4.1.1. Quantity of woody biomass that would be used in the absence of the project activity for Residential users, $B_{old,l,}$ tonnes / year / project device

Means of verification	The revised CPA DD/40/, page 22 gives a value of 3.10 for the parameter. The value is based on historical data given in "Energy Efficiency in Central America: Progress and Action towards the fulfilment of Goals of the Central America Sustainable Energy Strategy" by Victor Hugo ventura and Ryan Carvalho, published by UN-CEPAL, 2014 report/39/.
Findings	No findings
Conclusion	The values mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /9/ are consistent with the revised CPA DD/40/, The applied value is correct and justified.

I.4.1.2. Efficiency of the system being replaced as part of the SSC-CPA, η_{old}, Percentage

Means of verification	The revised CPA DD/40/, page 22, gives a value of 10% for the parameter. The value is sourced from the applied methodology AMS II.G. version 6.0/5/.
Findings	No findings
Conclusion	The values mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /9/ are consistent with the CPA-DD/3/. The applied value is correct and justified.

I.4.1.3. Net calorific value for biomass, $NCV_{biomass}$, TJ/tonne

Means of verification	The revised CPA DD/40/, page 23 gives a value of 0.015 TJ/tonne for the parameter. The parameter was found to be consistent with the PoA DD/1/. The value is sourced from the applied methodology AMS II.G. version 6.0/5/.
Findings	No findings
Conclusion	The values mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /9/ are consistent with the PoA-DD/1/ and revised CPA DD/40/, The applied value is correct and justified.

I.4.1.4. Emission factor for the substitution of non-renewable woody biomass by similar consumers, $EF_{projected\_fossil\_fuel}$, tCO_2/TJ

Means of verification	The revised CPA DD/40/, page 23, gives a value of 81.6 tCO_2/TJ for the parameter. The parameter was found to be consistent with the PoA DD/1/. The value is sourced from the applied methodology AMS II.G. version 6.0/5/.
Findings	No findings
Conclusion	The values mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /9/ are consistent with the PoA-DD/1/ and revised CPA DD/40/,. The applied value is correct and justified.

I.4.1.5. Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable, $f_{NRB,y}$, Fraction

Means of verification	The revised CPA DD/40/, page 24 gives a value of 0.8382 for the parameter. The parameter was found to be consistent with the PoA DD/01/. The value was sourced from a literature study carried out by CME - Envirofit International Ltd: NRB Study Honduras-version 03 dated 22 July 2013 and the value was fixed at the PoA level.
Findings	No findings
Conclusion	The values mentioned in the Monitoring Report /7/ and Emission Reduction

	Spreadsheet /9/ are consistent with the PoA-DD/1/ and revised CPA DD/40/. The applied value is correct and justified.

I.4.1.6. Leakage, tCO_2e, LE_y

Means of verification	The value of the parameter has been considered 0 as a default correction factor of 0.95 has already been applied to the value of B_{old} as per the registered PoA DD/1/ and revised CPA DD/40/.
Findings	CAR#04 was raised and closed. Please refer appendix 4 for further details.
Conclusion	The values mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /9/ are consistent with the PoA-DD/1/ and revised CPA DD/40/. The applied value is correct and justified.

I.4.2. Data and parameters monitored

I.4.2.1. Number of project devices of type i and age a that are operating in year y, $N_{y,i,a,}$ Number

<table>
<tr><td>Means of verification</td><td>Criteria/Requirements</td><td>Assessment/Observation</td></tr>
<tr><td></td><td>Measuring /Reading /Recording frequency</td><td>Annual</td></tr>
<tr><td></td><td>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</td><td>The revised CPA DD/40/ and PoA DD/1/ sets the frequency as atleast once in every two years. However, CME has monitored the parameter annually/7,9,18,19/. Since, the frequency followed is better than the set frequency, the approach was accepted by the DOE.</td></tr>
<tr><td></td><td>Monitoring equipment</td><td>CPA Distribution Records and monitoring survey records</td></tr>
<tr><td></td><td>Calibration frequency /interval:</td><td>Not applicable</td></tr>
<tr><td></td><td>How were the values in the monitoring report verified?</td><td>The values reported in the final MR /07/ and ER sheet /09/ were verified from stove distribution database/35/ maintained by the CME. The database contains list of all the names of the customers, address/ description of location, Stove model(HM5000), unique ID and distribution date. All ICSs sold up to the end of the current monitoring period are included in the ER sheet.

The verified value for ICS distributed and operational under the CPA at the end of the current monitoring period is presented below as per the age of;

<table>
<tr><td>Year of Installation</td><td>Age (yr)</td><td>ICS Installed</td><td>Operational rate</td><td>No. of ICS Operational</td></tr>
<tr><td>2015</td><td>1</td><td>10,338</td><td>0.83</td><td>8,615</td></tr>
<tr><td>2014</td><td>2</td><td>13,198</td><td>0.87</td><td>11,513</td></tr>
<tr><td>2013</td><td>3</td><td>4,388</td><td>0.75</td><td>3,291</td></tr>
</table>
</td></tr>
<tr><td></td><td>If applicable, has the reported data been cross-checked with other available data?</td><td>Yes. The information provided in the CPA Database/35/ were verified randomly during the site visit with the sales receipt and through interview of the household representatives.

The survey results were checked by the verification team and were found acceptable. The results are reproducible in the corresponding ER sheet /09/ of final Monitoring Report /07/.

The verification team randomly selected 9 samples for</td></tr>
</table>

		DOE's field survey and via on-site interview found out that all the ICS which are picked up for sampling are installed at the household and are in working condition, which was consistent with the CME's sample survey result.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The CME supervises the activities of contracted DO (distribution entity/CPA implementer), training of staff, guidelines and templates to facilitate accurate record keeping in their CPA database. During the site visit the sale process, record keeping were reviewed and were found reliable. QA/QC procedures were found to be appropriate and reliable. The person responsible for the monitoring & survey are well trained which is evident from the site visit interview. The assessment team has also checked the monitoring survey results /36/ vis-à-vis the DOE site visit samples and found that the results are comparable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not applicable
Findings	No findings	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

I.4.2.2. Efficiency of the device of type i and age a being deployed as part of the project activity, $\eta_{new,i,a}$, %

Means of verification	**Criteria /Requirements**	**Assessment/Observation**
	Measuring /Reading /Recording frequency	Annual
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the frequency is in line to the PoA DD/1/, revised CPA DD/40/ and applied methodology/5/.
	Monitoring equipment	The parameter was measured by conducting WBT tests. During the tests thermometer, weighing scale and moisture meters were used as monitoring equipment. The details of meters are as follows:

Equipment	Brand	Model	Serial

				Number
	Thermometer	Omega	Omagette HH308 Type K	141106595
	Mass Balance	LW Measurement	MCT- 33	MC1506041
	Moisture Meter	Lignomat	Mini Ligno DX	N/A

Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?

The accuracy of the meters are as follows:

Equipment	Serial Number	Accuracy
Thermometer	141106595	+/- 0.3% reading + 1^0C
Mass Balance	MC1506041	+/-2 division, +/- 0.002lbs
Moisture Meter	N/A	+/- 1.0%

It is noteworthy, the accuracy of the monitoring equipment comply with local/national standards.

Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?

The measurement of the parameter has been done from the newly purchased meters/21,23,24/ which has factory calibration validity of one year/25,26,28/. Therefore, the accuracy is valid for the entire measuring range.

Calibration frequency /interval:

No frequency has been set for the equipment used during the validation. However, the frequency as per the manufacturer's recommendation is annual/25,26,28/.

Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?

The measurement of the parameter has been done from the newly purchased meters which has factory calibration validity of one year/25,26,28/. Therefore, no calibration is required for the current monitoring period. The purchase orders of all the meters referred above/21,23,24/ have also been checked to confirm the dates of the purchase for the equipment.

	How were the values in the monitoring report verified?	All value verified are given below age wise: Age: Efficiency 1 year: 28.00% 2 year: 27.21% 3 year: 26.32% Accordingly, the following has been calculated. $\triangle\eta_{y,i=HM5000,a=1}$: 0.95 $\triangle\eta_{y,i=HM5000,a=2}$: 0.93 $\triangle\eta_{y,i=HM5000,a=3}$: 0.90 The reported values have been verified from the WBT reports/18,19/ prepared by trained staff of Envirofit and ER calculations /09/
	If applicable, has the reported data been cross-checked with other available data?	The verification team has checked all the stove efficiency test (WBT) results and found out the efficiency of the ICS are consistent with the WBT results as reported in the final MR/07/ and corresponding ER spreadsheet/09/.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The WBT test to calculate the efficiency of the cook stove of each age type have been conducted by trained staff of CME. The trainers were testing experts from Colorado State University Biomass Lab. The testing instructions/32/ and training presentation/31/ prepared for the staff were found to have all the information about the test.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No findings	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

I.4.2.3. Number of days of utilization of the project device during the year 'y', $\mu_{y,i}$, Days

Means of verification	Criteria/Requirements	Assessment/Observation

	Measuring /Reading /Recording frequency	Annual
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	The revised CPA DD/40/, PoA DD/1/ and applied methodology/5/ sets the frequency as atleast once in every two years. However, CME has monitored the parameter annually/07,09,36/. Since, the frequency followed is better than the set frequency, the approach was accepted by the DOE
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The use of baseline stoves was checked during the monitoring surveys conducted. Values reported in the final MR /7/ and ER sheet /9/ have been verified from monitoring survey records maintained by the CME and the verified value of the parameter is 316 days for current monitoring period. For samples, who have reported using only the project stove and not using the baseline stove, their utilization factor has been taken as 1.0 For samples who have reported using both project stove and baseline stove, the utilization factor has been determined as per para 22 of the applied methodology on the basis of frequency of usage of baselines stove and project stove. PP checked if meals were cooked daily on each stove to determine if they were being used daily. Based on the para 22 of the applied methodology AMS II.G. version 06 and the clarification SSC_711 (https://cdm.unfccc.int/filestorage/K/4/G/K4GAP31N2I96LOUDCXFJM7B08TSQEW/Final%20response.pdf?t=aUp8b21qYnJjfDDc8S- dEINdT5ehJUwuZEkK), PP has used a value of 0.5 as default utilization rate for those samples where the household was found using both the baseline stove and the project stove, as all such samples reported using both stoves daily. $\mu_{y,i}$ = The average utilization factor * 365 This is found to be conservative and appropriate.
	If applicable, has the reported data been cross-checked with other available data?	Yes. The information provided in the database were verified through visual inspection and through interview of the household representatives during the site visit.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are	The CME supervises the activities of contracted DO (FUNDEIH), training of staff, guidelines and templates to facilitate accurate record keeping in their CPA database. During the site visit the sale process, record keeping were reviewed and were found reliable.

	necessary QA/QC processes in place?	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not applicable
Findings	CAR#07 was raised and closed.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

I.4.3. Implementation of sampling plan

Means of verification	In the current CPA, Stratified Random Sampling approach was used by the PP in order to determine the sample size for monitoring the parameters viz. $N_{y,i,a}$ (Number of project devices of type *i* and age *a* that are operating in year y), $\eta_{new,i,a}$ (Efficiency of the device of type *i* and age *a* being deployed as part of the project activity) & $\mu_{y,i}$ (number of days of utilization of the project device during the year 'y'). The stoves were selected by randomly assigning, in corresponding stratum. The monitoring surveys and WBTs were conducted from 08 Jan 2016 to 13 July 2016. The revised CPA DD/40/ mention a reliability level of 90/10 which was followed by in the CPA which is evident as per the sampling calculations in the ER sheet/09/. The expected parameter values (mean, standard deviation and proportion) have been determined based on PP's knowledge and experience as per para 12(b) and 12(c) of the "Standard: Sampling and surveys for CDM project activities and programmes of activities", Version 05.0 which is acceptable to the assessment team as per the guidance. For the parameter, $N_{y,i,a}$ and $\mu_{y,i}$, the data was collected through a survey form and for the parameter $\eta_{new,i,a}$ water boiling tests were conducted using WBT protocol by PCIA as available on GACC website. The target population were the stoves distributed under the current CPA 9176-0001. As per page 31 of the revised CPA-DD, "the ICS shall be stratified by region, target user group, stove category (fuel) and ICS model combination (model and age)". Thus, the strata were defined by the PP in the MR which has been found to be correct and acceptable. For the monitoring parameter, the Stove Operating Fraction for determination of $N_{y,i,a}$, Stratified random sampling across stove model and age was used. The required sample sizes mentioned below were derived using equation (1), (2), (3), (4) and (9) of Appendix 3 of the Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0 which are for the proportion parameter.

Parameter	Size of population in strata	minimum sample size required	Calculated Sample Size (n)	Actual Monitored samples	Reliability Check
$N_{y,i=HM5000,a=1}$	10338	43	17	18	4.18 % margin of error, thus reliability is met
$N_{y,i=HM5000,a=2}$	13198		21	47	
$N_{y,i=HM5000,a=3}$	4388		7	20	

The sampling calculation in the ER sheet has been checked and found that PP has correctly applied all the formulas in order to determine the required sample size.

For the monitoring parameter Stove Efficiency $\eta_{new,i,a}$, Stratified random sampling across stove model and age was used. The required sample sizes mentioned below were derived using equation (19), (20), (21), (22) and (27) of Appendix 3 of the Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0 which are for the mean value parameter. Since the efficiency is a mean value parameter and the minimum required sample size came out to be less than 30, thus PP used t-distribution correction for calculating the required minimum sample size as per para 13 of Sampling standard version 5. The t-value was derived in Microsoft Excel using the TINV function.

>Parameter	Size of population in strata	minimum sample size required	Calculated Sample Size (n)	Actual Monitored samples	Reliability Check
$\eta_{new,i=HM5000,a=1}$	10338	3	2	2	2.06% margin of error, thus reliability is met
$\eta_{new,i=HM5000,a=2}$	13198		3	4	
$\eta_{new,i=HM5000,a=3}$	4388		1	3	

The sampling calculation in the ER sheet has been checked and found that PP has correctly applied all the formulas in order to determine the required sample size.

For the monitoring parameter Utilization of Project stoves - $\mu_{y,i}$, Stratified random sampling across stove model was used. For parameter $\mu_{y,i}$, the population was considered as one stratum as the methodology does not require determination for this parameter based on different ages. The required sample sizes mentioned below have been derived using equation (1), (2), (3), (4) and (9) of Appendix 3 of the Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0 which are for the proportion parameter.

Parameter	Size of population in strata	minimum sample size required	Calculated Sample Size (n)	Actual Monitored samples	Reliability Check
$\mu_{y,i=HM5000}$	27924	48	48	71	3.83% margin of error, thus reliability is met

The sampling calculation in the ER sheet has been checked and found that PP has correctly applied all the formulas to determine the required sample size.

All parameters of interest included in the Sample Size Calculator spread sheet/09/ were checked for the input values as well as formula applied and were found consistent. The reliability (demonstration of precision achieved after the survey results) is depicted in the ER sheet /09/ corresponding to final Monitoring Report /07/, which were also found correct. Based on the verified results the verification

	team found that the required precision is met in all the cases and therefore the WBT / survey results /18/ were directly used in the calculation of ERs.
Findings	CAR#05 was raised and closed. Please refer appendix 4 for further details.
Conclusion	The verification team confirmed that the sampling plan and the parameter values are in accordance with the monitoring plan provided in PoA DD.

I.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	The monitoring plan (included in revised CPA DD/40/ and registered PoA DD/01/) does not state the calibration requirements for any of the parameter (Section I.4.2). However, the verification team has checked if the monitoring equipment used during WBT test (mass balance, moisture meter and thermometer) were duly calibrated. As a result, following information was verified;

Equipment	Brand	Model	Serial Number	Accuracy
Thermometer	Omega	Omagette HH308 Type K	141106595	+/- 0.3% reading + 1^0C
Mass Balance	LW Measurement	MCT- 33	MC1506041	+/-2 division, +/- 0.002lbs
Moisture Meter	Lignomat	Mini Ligno DX	N/A	+/- 1.0%

All the equipment were bought on 21-22/10/2015. Since, the newly purchased equipment/21,23,24/ have been used and the validity of calibration is annual as per the manufacturer/25,26,28/, the calibration is not required to be done.

Findings	CAR#04 was raised and closed. Please refer appendix 4 for further details.
Conclusion	The verification team confirm that CME applied good practices (as per manufacturer recommendation) while using the monitoring equipment and these were under the state of calibration. There is no specific requirement prescribed in this regard in the registered monitoring plan of monitoring methodology. Therefore, the approach presented by PP was accepted since annual frequency is at par with industry standards.

I.6. Assessment of data and calculation of emission reductions or net removals

I.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team verified that a) A complete set of data for the monitoring period was available for the monitoring period and the verification of each monitoring parameter is elaborated under Section I.4.2 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet /09/ of final Monitoring Report /07/. b) The information provided in the monitoring report was cross checked with other sources, wherever appropriate and available, and such information is also included under Section I.4.2 of this report. c) The calculations of baseline emissions as presented in the corresponding ER calculations sheet /09/ of final Monitoring Report /07/ were checked and found to be consistent with the formulae and methods described in the registered monitoring plan of each relevant revised CPA-DD, registered PoA-DD and the applied methodology. d) All assumptions used in the emission calculations were found appropriate and therefore justified e) Appropriate emission factors, IPCC default factors and other reference values have been correctly applied. This has also been elaborated under Section I.4.1 of this report. f) No standardized baseline was prescribed in the registered PoA DD and therefore it has not been applied. g) There is no pro-rate approach (para 402(g) of CDM VVS Version 09) was applied in

the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol.

The equations listed below were used to determine the baseline emissions as provided in the monitoring report /07/ and applied in the corresponding ER calculations sheets /09/.

Total ER reductions achieved for any CPA is calculated by using the following equation:

$$ER_{y,i} = \sum_{a=1}^{a=y} B_{y,savings,i,a} \times N_{y,i,a} \times \frac{\mu_{y,i}}{365} \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\_fossilfuel} - LE_y$$

where,

$ER_{y,i}$	Emission reductions during year y in tCO2e
$B_{y,savings,i,a}$	Quantity of woody biomass
a	Indices for the age (in years)
fNRB	Fraction of woody biomass saved by the project activity
$NCV_{biomass}$	Net calorific value of the non-renewable woody biomass (IPCC default for wood fuel, 0.015 TJ/tonne based on the gross weight of the wood that is air-dried) (TJ/tonnes)
$EF_{projected\_fossilfuel}$	Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 tCO_2/TJ
$N_{y,i,a}$	Number of project devices of type i and age a operating in year y
$\mu_{y,i}$	Number of days of utilization of the project device during the year, y. Its value may be considered as 365 where it can be demonstrated that the pre-project device has been decommissioned and is no longer used.
LEy	Leakage emissions in the year y, to be taken as 0 as leakage correction factor of 0.95 shall be directly applied to $B_{y,savings,i,a}$

Calculation of $B_{y,savings,i,a}$ has been done by using the following equation:

$$B_{y,savings,i,a} = B_{old,i} \times \left(1 - \frac{\eta_{old}}{\eta_{new,i,a=1} \times \Delta\eta_{y,i,a}}\right)$$

Where,

η_{old}	Efficiency of the pre-project device (fraction)
$\eta_{new,i,a}$	Thermal efficiency of the device of type i being deployed as part of the project activity (fraction)
$\Delta\eta_{y,i,a}$	Factor to consider the efficiency loss of the project device type i due to its aging at the year y

The values for all the parameters listed above have been assessed under section I.4.1 and I.4.2. of this report.

As the efficiency, may generally decrease over a period of time the age of ICS, therefore in order to discount that in the baseline emissions the total quantity of stoves as per relevant vintage is required. It has been verified that the corresponding ER calculations sheet /09/ to the final Monitoring Report /07/ has considered the number of stoves as per the vintage and accordingly the efficiency of such stoves in the ER calculation for the CPA.

	The expressions used were found consistent with the registered PoA DD/1/, revised CPA DD/40/ and the applied methodologies AMS-II.G., version 06/5/.
Findings	CAR#04 was raised and closed. Please refer appendix 4 for further details.
Conclusion	The verification team confirms that a) The complete data was available and is duly reported; b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section I.4.2 of this report); c) Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals were followed; d) Appropriate emission factors, IPCC default factors and other reference values were correctly applied. e) There is no pro-rate approach (para 403(e) of CDM VVS Version 09) was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol.

I.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	There is no prescribed method mentioned in the registered PoA DD/1/, revised CPA DD/40/ and applied monitoring methodology/5/ for calculation of project emissions. The onsite visit and project design also did not reveal any potential source to be considered in this regard.
Findings	No finding was raised.
Conclusion	No project emissions were required to be calculated.

I.6.3. Calculation of leakage GHG emissions

Means of verification	Leakage emissions has been taken as zero as per the methodology and a correction factor of 0.95 has been applied to the $B_{y,savings,i,a}$ and B_{old} directly. The Leakage adjustment factor has been duly accounted in the calculation of baseline emissions. The onsite visit and project design also did not reveal any potential source to be considered in this regard.
Findings	No finding was raised.
Conclusion	No additional leakage emissions (other than leakage adjustment factor applied to baseline calculations) were required as per methodology AMS-II.G., version 06/5/.

I.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	The value of baseline emission obtained by applying the equations provided in the registered PDD is 38,179tCO_2e. The project emissions and leakages for the project activity are considered as zero. Therefore, the final value of net GHG emission reductions obtained is 38,179 tCO_2e. The calculations presented in this regard in the final monitoring report /07/ and corresponding ER calculations sheet /09/ were found appropriate and complying with the provisions prescribed in the registered monitoring plan of revised CPA DD/40/, registered PoA-DD/1/ and applied methodology/5/. The verification team confirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found acceptable.
Findings	No finding was raised.
Conclusion	The verification team confirms that a) The complete data was available and is duly reported; b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section I.4.2 of this report); c) Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project emissions and leakage emissions were followed; d) Appropriate emission factors, IPCC default factors and other reference values were correctly applied. e) There is no pro-rata approach (para 403(e) of CDM VVS Version 09) was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol. The total number of ERs achieved during the current monitoring period (for ICS

	only) is 38,179 tCO_2e.

Specific-case CPA reference number	Baseline emissions or baseline net GHG removals by sinks (tCO_2e)	Project emissions or actual net GHG removals by sinks (tCO_2e)	Leakage (tCO_2e)	GHG emission reductions or net GHG removals by sinks (tCO_2e)		
				Results achieved in the period up to 31 December 2012	Results achieved in the period from 1 January 2013 onwards	Results achieved in the entire monitoring period
9176-0001	38,179	0	0	0	38,179	38,179
Total	38,179	0	0	0	38,179	38,179

I.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA

Means of verification	After reviewing the ER calculations sheet /09/, it can be concluded that the actual emission reductions achieved by the CPA (9176-0001) are less than the estimated emission reductions in the revised CPA-DD/40/ for the comparable period.
Findings	No finding was raised.
Conclusion	The actual emission reductions achieved in the current monitoring period for CPA (9176-0001) is lower than the emission reductions stated in the revised CPA-DD/40/. Therefore, it has been accepted by the verification team.

Specific-case CPA reference number	Value estimated in ex ante calculation in the included specific-case CPA-DD(s)	Actual values achieved by the specific-case CPA(s) during this monitoring period
9176-0001	42,222	38,179
Total	42,222	38,179

I.6.6. Remarks on difference from estimated value in registered PDD

Means of verification	The achieved emission reductions were found to be less than the estimated emission reductions. Therefore, no further explanation has been sought by assessment team and thereby the difference has been accepted.
Findings	No finding was raised.
Conclusion	The achieved ERs are less than the estimated amount of emission reductions.

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Level
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
CER	Certified Emission Reduction
CEP	Clean Energy Product
CL	Clarification Request
CME	Coordinating or Managing Entity
CPA	Component Project Activity
CP	Crediting period
DOE	Designated Operational Entity
DNA	Designated National Authority
EB	Executive Board
ER	Emission Reductions
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
ICS	Improved Cook Stove
IPCC	Intergovernmental Panel on Climate Change
PDD	Project Design Document
RMP	Registered monitoring plan
TA	Technical Area (with in Sectoral Scope)
TR	Technical Reviewer
VVS	Validation and Verification Standard
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Level
ICS	Improve Cook Stoves
IPCC	Inter-governmental Panel on Climate change
VVS	Validation and Verification Standard
UNFCCC	United Nation Framework convention on Climate change
WBT	Water Boiling Test
CEPAL	Economic Commission for Latin America and the Caribbean
FUNDEIH	Fundacion para el Desarrollo Integral de Honduras
QA/QC	Quality Assurance and Quality control

Appendix 2. Competence of team members and technical reviewers

Competence Statement	
Name	Nayan Jyoti Deka
Country	India
Education	M.Tech. (Energy Technology), Tezpur University
Experience	8 Years +
Field	Climate Change & Energy Management
Approved Roles	

Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-III.H., AMS-I.C., ACM0006, ACM0002, ACM0014		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.1, 1.2, 3.1, 13.1)	YES		
Reviewed by	Abhishek Mahawar	**Date**	16/12/2016
Approved by	Ashok Kumar Gautam	**Date**	16/12/2016

Competence Statement			
Name	Anshika Gupta		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	2 Year +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.A., AMS-II.G., ACM0002, AMS-III.A.V.		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (1.2, 3.1)	NO		
Reviewed by	Abhishek Mahawar	**Date**	08/09/2016
Approved by	Ashok Kumar Gautam	**Date**	08/09/2016

Competence Statement	
Name	Deepika Mahala
Country	India
Education	M. Sc. (Environmental Mgmt), GGSIP University B.Sc. Honour (Chemistry), Sri Venkateshwar College, DU
Experience	1.5 Year
Field	Climate Change
Approved Roles	
Team Leader	NO
Validator	YES
Verifier	YES
Methodology Expert	NO
Local expert	YES (India)
Financial Expert	NO
Technical Reviewer	NO
TA Expert	NO

Trainee (Team Leader)	YES		
Reviewed by	Abhishek Mahawar	**Date**	08/09/2016
Approved by	Ashok Kumar Gautam	**Date**	08/09/2016

Competence Statement			
Name	Katherine Valladares		
Country	Honduras		
Education	University Degree (Environmental Engg.)		
Experience	3 yrs		
Field	Environmental Science		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (Honduras)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	NO		
Reviewed by	Abhishek Mahawar	**Date**	01/12/2016
Approved by	Ashok Kumar Gautam	**Date**	01/12/2016

Competence Statement			
Name	Ashok Gautam		
Country	India		
Education	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management)		
Experience	14 Years +		
Field	Energy, Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-I.A., AMS-I.C. AMS-II.D., AMS-II.G., AMS-III.E., AMS-III.H., AMS-III.AV., ACM0002, ACM0004, ACM0006, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.1)	YES		
TA Expert (1.2)	YES		
TA Expert (3.1)	YES		
TA Expert (13.1)	YES		
Reviewed by	Abhishek Mahawar	**Date**	08/09/2016
Approved by	Kaviraj Singh	**Date**	08/09/2016

Competence Statement			
Name	Anu Chaudhary		
Country	India		
Education	Master of Science (Environmental Management)		
Experience	14 yrs		
Field	Environmental Science, CDM		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0001, AMS.II.G, AM0011, AMS.III.G, AMS.III.E, ACM0002, AMS.III.B, AMS.I.D, AMS.I.C, AMS.III.D, AMS.II.J, ACM0006		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (1.2 & 13.1)		
Reviewed by	Abhishek Mahawar	**Date**	12/12/2016
Approved by	Ashok Kumar Gautam	**Date**	12/12/2016

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	CME	PoA DD	Version 5.0, dated 16/01/2015	Other
2.	UNFCCC	Validation report	Version 4.0, dated 11/06/2015	Other
3.	CME	CPA DD(9176-0001)	Version 5.0, dated 16/01/2015	Other
4.	DNV	CPA validation report	Version 4.0, dated 11/06/2015	Other
5.	UNFCCC	Methodology AMS II G,	version 06	Other
6.	CME	Monitoring report (Publication)	Version 1.0, dated 11/10/2016	CME
7.	CME	Monitoring report (Final version)	Version 3, dated 15/03/2017	CME
8.	CME	ER calculation sheet (Initial)	-	CME
9.	CME	ER calculation sheet (Final)	-	CME
10.	IPCC	IPCC Defaults	2006	Other
11.	UNFCCC	CDM VVS	Version 09	Other
12.	UNFCCC	CDM PS	Version 09	Others
13.	UNFCCC	CDM PCP	Version 09	Others
14.	UNFCCC	Standard: Sampling and surveys for CDM project activities and programme of activities	5.0	Others
15.	UNFCCC	Guideline: Sampling and surveys for CDM project activities and programme of activities	4.0	Others
16.	UNFCCC	CDM-PoA-MR-FORM	Version 1.0	Others
17.	Engines and	Stove Manufacturers Emissions &	-	CME

	Energy Conversion Lab, Colorado State University, Envirofit International and Philips	Performance Test Protocol by Morgan DeFoort,Christiam LÓrange and Cory Kreutzer, Nathan Lorenz and Wiecher Kampling and Jan Alders		
18.	Envirofit International Inc.	Monitoring data for WBT conducted during the current monitoring period with details of clients.	-	CME
19.	Envirofit International Inc.	Monitoring Survey Questionnaire with details of client	12/01/2016	CME
20.	Envirofit International Inc	WBT Equipment Details	-	CME
21.	Envirofit International Inc.	Purchase Order for Weighing scale model MCT-33	21/10/2015	CME
22.	LW Measurement LLC	Weighing scale operating manual for autocalibration	14/11/2012	CME
23.	Envirofit International Inc	Purchase Order to Omega Engineering Inc. for HH308 Dual Input thermometer	21/10/2015	CME
24.	Envirofit International Inc	Purchase Order to Omega Engineering Inc. for KHSS-116G-RSC-12 Utility Handle Probe W/RSC	26/10/2015	CME
25.	OMEGAETTE	Specification of HH308 Thermometers	-	CME
26.	Envirofit	Mail communication between Envirofit and Omega (Calibration frequency as per the manufacturer)	02/11/2016	CME
27.	LIGNOMAT USA LTD	Invoice for Mini- LIGNO DX Meter	20/10/2015	CME
28.	LIGNOMAT USA LTD	Specification and autocalibration http://www.lignomatusa.com/meters/mini-ligno-dx-wood-moisture-meter/	22/12/2016	CME
29.	Envirofit	Mail communication between Envirofit a and Lignomat for Accuracy Class	21/11/2014	CME
30.	Envirofit & FUNDEIH	Carbon transfer agreements with the details of client (EP7A000889, EP7A020539)	12/09/2013, 07/06/2015	CME
31.	Energies & Energy Conversion Lab	WBT Training Presentation	10/12/2015	CME
32.	Powerhouse Energy Campus, Colorado State University	Plancha Stove Testing Procedure	-	CME
33.	Envirofit	Specifications of HM5000 Plancha Wood Cook stove	-	CME
34.	Envirofit & FUNDEIH	Employees Count 2014-2016	2014-2016	CME
35.	Envirofit & FUNDEIH	Distribution database	2013-2016	CME
36.	Envirofit & FUNDEIH	Monitoring survey forms filled by end users	-	CME
37.	UNFCCC	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/MN1FPHAXIBV8SR9QWYOGU7K3C06L54/view	-	Others
38.	-	itouchmap.com- https://itouchmap.com/latlong.html	Last accessed on 29/12/2016	Others
39.	CEPAL	http://repositorio.cepal.org/handle/11362/37032	Last accessed on 29/12/2016	Others
40.	Envirofit	Revised CPA DD	Version 05.1, dated 11/01/2017	CME
41.	ESPL	PRC Validation Report	Version 2.0, dated 17/03/2017	ESPL
42.	Envirofit &	Contractual agreement signed between	-	CME

	FUNDEIH	Envirofit and the DO		

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 :**12/12/2016
Description of FAR				
At the time of verification, the DOE needs to verify that the improved cook stoves that are part of this PoA emission reduction calculation were only disseminated within the country of Honduras.				
CME response				**Date :** 21/12/2016
A stove database listing all stoves under the CPA is being submitted. The end user address for each user is mentioned therein. As per the same, all stoves that are part of the emission reduction calculation, are in Honduras.				
Documentation provided by CME				
PoA 9176 MP#1 ER workbook version 2.0 20122016.xlsx				
DOE assessment				**Date:** 30/12/2016
The assessment team has verified the stove database and also from the site visit it has been confirmed that the ICS are part of this PoA emission reduction calculations only. Thus, FAR#01 was closed.				

FAR ID	02	**Section no.**	E.2	**Date :** 12/12/2016
Description of FAR				
The unique id will be imprinted on the ICS that is distributed as part of this PoA. The stoves be distributed after the CPA inclusion and hence the unique id will have to be verified at the time of CPA verification.				
CME response				**Date :** 21/12/2016
The stove database listing all stoves under the CPA includes the unique identification for each stove (stove serial number)				
Documentation provided by CME				
PoA 9176 MP#1 ER workbook version 2.0 20122016.xlsx				
DOE assessment				**Date:** 30/12/2016
During the site visit, the assessment team has checked the ICS on sample basis and found that all the ICS are having unique id imprinted on it. Thus, FAR#02 was closed.				

FAR ID	03	**Section no.**	E.2	**Date :** 12/12/2016
Description of FAR				
The PP will cross-check the CPA with other CPAs in this PoA and with CPAs in any other PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard, and other relevant voluntary schemes to ensure that the CPA is not included in any other PoA, CDM project activity or voluntary project activity. All of this information will be summarized in a report and provided to the DOE upon verification. To ensure that the CME and CPA implementer are not double counting the CERs across PoAs or CPAs, the DOE needs to verify that the CME has conducted a cross check with other PoAs or CPAs.				
CME response				**Date :** 21/12/2016
The assessment of PA/PoAs registered in Honduras is as follows: 1. There are 29 CDM project activities registered in Honduras. None of the registered projects involve improved cook stove as technology / measure (http://cdm.unfccc.int/Projects/projsearch.html) 2. There are 4 CDM PoA registered on Honduras including PoA 9176. The other three PoA don't involve improved cook stove as technology/ measure. (http://cdm.unfccc.int/ProgrammeOfActivities/registered.html) 3. In Gold Standard, there are 16 PA/PoAs registered in Honduras. 4 out of these (including PoA 9176) involve improved cook-stoves as technology / measure. However, the stove models included in CPA 01are not included in any of these other 3 PA / PoAs (https://mer.markit.com/br-reg/public/index.jsp?entity=project&name=Honduras&standardId=&unitClass=&sort=project_name&dir=ASC&start=0) 4. In VCS, there in only one project registered in Honduras and it does not involve improved cook stoves (http://www.vcsprojectdatabase.org/#/home) 5. Lastly, but not the least, Envirofit confirms that stoves included in CPA 1 (as listed in the Installation				

database) are not a part of any other regulatory / voluntary project / PoA in any other program.
Documentation provided by CME
DOE assessment **Date:** 30/12/2016
CME has checked with other CPAs in order to ascertain that there are not double counting the CERs across PoAs or CPAs. The CME has provided the cross-checking web links to the assessment which are verified and found to be satisfactory. Thus, FAR#03 was closed.

Table 2. CAR from this verification

CAR ID	04	**Section no.**	H.1, I.4.1.6, & I.6.1	**Date :** 12/12/2016
Description of CAR				
a) The training of the monitoring staff is not discussed in the MR under section F. b) Parameter LEy is missing under section G.1. c) Calibration details of the monitoring equipment are missing in the MR under section G.2. d) Inconsistency in the values are observed w.r.t ER sheet for HM 5000 Batch 2 (Age 2) and HM 5000 Batch 3 (Age 1) under section G.3 e) MR guideline says; Provide all formulae and calculations of baseline emissions or baseline net GHG removals by sinks. Attach to the monitoring report any electronic spreadsheets used to present full calculations or detailed information under section H.1.				
CME response				Date : 21/12/2016
a) Information on the training of monitoring staff has been added in the MR under section G.2 in parameter tables as well as G.3 on page 16 of revised MR. b) Parameter table for LEy has been added under section G.1 of revised MR c) Calibration details of the monitoring equipment have been added in the revised MR under section G.2. The thermometer and weighing scale were purchased on 21 Oct 2015. The moisture meter was purchased on 26 Oct 2015. The thermometer was pre-calibrated at the time of purchase and requires annual calibration as confirmed by manufacturer. The weighing scale has an internal auto calibration software for automatic calibration. The moisture meter specification sheet confirms a feature which checks calibration internally and automatically adjusts, as necessary. Thus, all equipment used for WBT were either new or calibrated at the time of use. d) Inconsistency in the reported values have been rectified in section G.3 of the revised MR. e) The formulae and calculations of baseline emissions or baseline net GHG removals by sinks have been presented in section H.1. of the revised MR.				
Documentation provided by CME				
1. PoA 9176 MP#1 MR ver 2.0 20122016.docx 2. Purchase order thermocouple thermometer (Omegaette HH308k) 3. Thermocouple specification sheet indicating factory calibration (NIST) 4. Email from Omega confirming annual calibration frequency as standard for thermocouple thermometer 5. Purchase order weighing scale (Tree MCT – 33) 6. Weighing scale specification sheet confirming auto calibration feature 7. Purchase order moisture meter (Lignomat) 8. Specification sheet for moisture meter confirming auto calibration 9. Email from Lignomat confirming accuracy of moisture meter				
DOE assessment				**Date:** 30/12/2016
a) The information has now been added under the section F. b) The parameter has now been under the section G.1. c) Calibration details have been added to the MR and related evidences have also been provided to the verification team. d) Inconsistent values have been corrected now and revised MR have submitted to the DOE. e) The formulae and calculation and have added to the revised MR and all the information was found to be consistent with the PoA DD and the CPA DD. Thus, CAR#04 stands closed.				

CAR ID	05	**Section no.**	I.4.3	**Date :** 12/12/2016
Description of CAR				
In the ER sheet under tab “MP#1 Sample Size Cal & Results”, the sample size calculation for stove efficiency is found to be not as per the equation 27 of Guidance for sampling and survey, version 4. Also, the “estimated variance of efficiency (SD)” calculation is not inline to equation 22 of Guidance for sampling and survey, version 4.				
CME response				**Date :**21/12/2016

The sample size calculations have been corrected accordingly in the ER calculator.
Documentation provided by CME
PoA 9176 MP#1 ER workbook version 2.0 20122016.xlsx
DOE assessment **Date:** 30/12/2016
The Guidance for sampling and survey, version 4 has been followed for the calculation of sample size. The revised ER workbook has been submitted to the DOE. Thus, the CAR stands closed.

Table 3. CL from this verification

CL ID	06	**Section no.**	I.2.2.	**Date :** 19/01/2017
Description of CL				
CME has proposed a PRC during the current verification. The CME is requested to submit the documents listed below: 1. Revised CPA DD. 2. Revised Monitoring report				
CME response				**Date :** 19/01/2017
The documents listed above have been submitted to the DOE. Please refer the attached documents.				
Documentation provided by CME				
1. PoA 9176 MP#1 MR Version 02.1 2. Revised CPA DD Version 05.1				
DOE assessment				**Date:** 19/01/2017
The revised CPA DD and the revised MR have been submitted by the CME. All the proposed changes have been incorporated in the revised MR and the revised CPA DD Version 05.1. The detailed assessment of the PRC has been provided in the PRC validation report which will be submitted along with the verification report. Appendix 1 of the Project Standard exempts the PRC corrections proposed from Prior approval process. Thus, the CAR stands closed.				

CAR ID	07	**Section no.**	I.4.23.	**Date :** 16/03/2017
Description of CAR				
PP is requested to kindly clarify the following issues – 1. The monitoring report (page 6) indicates that CPA001 has implemented portable biomass-fuelled stoves (model HM5000). However, it is not clear if the biomass used is charcoal or firewood or both. The CME is requested to provide information (in the CPA-DD and monitoring report) on the type of biomass used by the installed efficient stoves. 2. The CPA-DD and the monitoring report indicate, in case the pre-project devices are found in use, the parameter "number of days of utilization of the project device during the year ($\mu_{y,i,a}$)" is determined as a product of No. of days in the monitoring period and proportion of meals prepared by pre-project and project cook-stoves. However, the applied methodology (AMS-II. G ver. 06 paras 22 and 23) requires that, if both pre-project devices and project devices are used together, measurement campaigns based utilization hours for each device shall be used to attribute days each device is used. The CME is requested to provide information on how the monitoring of the parameter "number of days of utilization of the project device during the year ($\mu_{y,i,a}$)" is in compliance with the applied methodology (AMS-II.G ver. 06 paras 22 and 23) considering that different meals take different lengths of time to prepare and the applied meal-proportioning approach may lead to less conservative estimation of the parameter "number of days of utilization of the project device during the year ($\mu_{y,i,a}$). 3. The monitoring report indicates that annual sampling surveys were conducted for the parameters "Number of project devices of type i and age a that are operating in year y ($N_{y,i,a}$), thermal efficiency of the device of type i and age a being deployed as part of the project activity ($\eta_{new,i,a}$) and Number of days of utilization of the project device during the year ($\mu_{y,i,a}$)". However, no information is provided on the dates when the sampling surveys were conducted.				
CME response				**Date :** 16/03/2017

1. The Monitoring report has been revised to mention that HM5000 is a woodfuel stove. 2. The number of days of utilization for samples who reporting using both the stoves (project and baseline) has been taken in line with AMS II.G. version 6.0,para 22 and clarification SSC 711. Please refer revised MR and ER calculator 3. The period during which the sampling surveys were conducted has been mentioned in the revised monitoring report
Documentation provided by CME
1. 9176-001_MR version 3.0 13032017 2. 9176-001_ER calculator version 2.0 15032017
DOE assessment **Date:** 16/03/2017
PP has provided the responses which have been found to be satisfactory. Also, the necessary changes have been made in the MR & ER sheet which is found to be appropriate and correct. Thus, CAR#07 was closed.

Table 4. FAR from this verification

There is no FAR from this verification.

- - - - -

Document information

Version	Date	Description
01.0	5 June 2015	Initial publication.

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