
VERIFICATION REPORT

CO2BALANCE UK

[PoA TITLE: EFFICIENT COOK STOVE
PROGRAMME: KENYA [UNFCCC Ref No:
5336]

PoA Monitoring Period: 21st March 2012 to 20th March 2013 (Both days included)

[CPA TITLE: EFFICIENT COOK STOVE PROGRAMME: KENYA CPA
No. 1 ELDORET EAST AND KEIYO DISTRICTS CO2BALANCE UK LTD
(UNFCCC Ref No: 5336-0001)

CPA No.1 Monitoring Period: 21st March 2012 to 20th March 2013 (Both days included)

[CPA TITLE: EFFICIENT COOK STOVE PROGRAMME: KENYA – CPA
No. 2 MATHIRA EAST DISTRICT CO2BALANCE UK LTD
(UNFCCC Ref No: 5336-0002)

CPA No.2 Monitoring Period: 31st January 2013 to 20th March 2013 (Both days included)

REPORT No: C-2-I-03-S-0353_CPA_VE

REVISION No: 04



VERIFICATION REPORT – vvsv7.0

Date of first issue:		Project No:	
17 th May 2013		C-2-I-03-S-0353 CPA	
PoA Title:		UNFCCC Ref No:	
Efficient Cook Stove Programme: Kenya		5336	
CPA Included		UNFCCC Ref No:	
1. Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd		1. 5336-0001	
2. Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd		2. 5336-0002	
Approved By and Date:		Organizational unit:	
Bilal Anwar (30 July 2014)		PJRCDM India Pvt. Ltd.	
Client Name:		Client Reference:	
Co2balance UK		Mr. Richard Iliffe	
Publication of Monitoring Report for Global Stakeholders Consultation:			
Publication Date:		9 April 2013	
First MR Version and Date:		Version 1 dated 4 April 2013	
Final MR Version and Date:		Version 1.12 dated 29/07/2014	
Summary:			
Methodology(ies) used:	AMS-II.G. (Energy efficiency measures in thermal applications of non-renewable biomass)		
Version number and date:	Version 03 EB60 Valid from 29 th April 2011 to 02 nd August 2012		
Sectoral Scope:	03		
Scale of the Project activity:	<input type="checkbox"/> Large Scale <input checked="" type="checkbox"/> Small Scale		
Verification Status:			
<p>Perry Johnson Registrars Carbon Emissions Services, INC (PJRCES) has performed the 1st periodic verification of CPA “Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd” with UNFCCC Ref No: 5336-0001 and CPA “Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd” with UNFCCC Ref No: 5336-0002 which have been included in PoA “Efficient Cook Stove Programme: Kenya” with UNFCCC Ref No: 5336. The verification includes confirming the implementation of PoA and the CPAs included in the POA, Monitoring Plan in CPA-DDs and the application of applied methodology AMS II G “Energy efficiency measures in thermal applications of non-renewable biomass” version 3.0.</p> <p>An on-site visit was conducted to verify the data submitted in the monitoring report. During this 1st periodic verification, verification team found some changes from the project activity as described in the registered PoA-DD and CPA-DDs (CPA-DD-1 & CPA-DD-2). The changes were permanent in nature, hence DOE on behalf of PP requested for approval on changes as post-registration changes (Ref. No: PRC-5336-001) by CDM Executive Board. In accordance with the relevant regulations, the Board considered the request for post-registration changes during EB Meeting 80 and agreed to permit the post-registration changes of the PoA. The report is based on the assessment of the implemented monitoring plan along with the project design, undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, follow up actions and also the review of the applicable approved methodology and underlying formulae and calculations.</p> <p>In summary, it is PJRCES’s opinion that the CPA “Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd” with UNFCCC Ref No: 5336-0001 and CPA “Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd” with UNFCCC Ref No: 5336-0002 in Kenya is implemented as planned and described in the validated and revised registered project design document of PoA “Efficient Cook Stove Programme: Kenya”. The monitoring system is in place and emission reductions are calculated without material misstatements. PJRCES, Inc.’s, opinion relates to project’s GHG emissions and the resulting GHG</p>			



VERIFICATION REPORT - VVSv7.0

emissions reported and related to the valid and revised registered project baseline, monitoring and associated documents. Based on the information provided by PP and evaluated by verification team, PJRCES, Inc confirms following:

Emission Reductions (tCO₂e) : **18,337**

- ☒ Corrective Actions & Clarifications Requested
- ☒ Recommendation to CDM EB with a request for issuance
- ☐ Not recommended for issuance as a Negative Verification Opinion is issued.
(The verification report shall be sent to the CDM Executive Board)

Verification Team:		Documentation Distribution:
Team Leader	Rohit Badaya	<input checked="" type="checkbox"/> No distribution without permission from the Client or responsible organizational unit <input type="checkbox"/> Limited distribution <input type="checkbox"/> Unrestricted distribution
Sector Expert (TA-1.3) & Team Member	Ajay Verma	
Team Member	Siddhartha Nauduri	
Independent Technical Review:		
Technical Reviewer:		
Date: 30th July 2014		
Name: Anjana Sharma		
Report No.:	Rev. No.	Date:
C-2-I-03-S-0353_CPA_Ve	01	17 th May 2013
	02	15 th July 2013
	03	26 th July 2013
	04	29 th July 2014



VERIFICATION REPORT – VVSv7.0

ABBREVIATIONS

BAU	Business as usual
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification request
CME	Coordinating and Managing Entity
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
EB	Executive Board
EF	Emission Factor
EIA	Environmental Impact Assessment
FAR	Forward Action Request
ICS	Improved Cook Stove
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
MIS	Management Information system
MoC	Modalities of Communication
MoM	Minutes of Meeting
MP	Monitoring Plan
MWh	Mega Watt Hours
NCV	Net Calorific Value
NGO	Non-governmental Organisation
NRB	Non Renewable Woody Biomass
ODA	Official Development Assistance
OM	Operational Margin
PoA	Programmes of Activity
CPA	Component Project Activity
PCP	Project Cycle Procedure
PDD	Project Design Document
PJRCS	Perry Johnson Registrars Carbon Emissions Services, Inc
PS	Project Standard
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard, version 7.0
WBT	Water Boiling Test



VERIFICATION REPORT – VVSv7.0

TABLE OF CONTENTS

1. INTRODUCTION.....	6
1.1. OBJECTIVE	6
1.2. SCOPE	6
1.3. GHG PROJECT DESCRIPTION	7
1.4. VERIFICATION TEAM	8
2. METHODOLOGY.....	8
2.1. REVIEW OF DOCUMENTS.....	8
2.2. SITE VISIT & FOLLOW UP INTERVIEWS	9
2.3. RESOLUTION OF CARs, CLs & FARs	10
2.4. INTERNAL QUALITY CONTROL	11
3. VERIFICATION CONCLUSIONS	11
3.1. REMAINING ISSUES FROM VALIDATION OR PREVIOUS VERIFICATION(S) [§213]	11
3.2. COMPLIANCE WITH THE PROJECT IMPLEMENTATION WITH THE REGISTERED PROJECT DESIGN DOCUMENT [§228]	<u>1211</u>
3.3. COMPLIANCE OF MONITORING PLAN WITH THE MONITORING METHODOLOGY INCLUDING APPLICABLE TOOL(S) [§232] ..	<u>1312</u>
3.4. COMPLIANCE OF MONITORING ACTIVITIES WITH THE REGISTERED MONITORING PLAN [§235 – §236].....	<u>1412</u>
3.5. COMPLIANCE WITH THE CALIBRATION FREQUENCY REQUIREMENTS FOR MEASURING INSTRUMENTS [§243]	<u>1613</u>
3.6. ASSESSMENT OF DATA AND CALCULATION OF EMISSION REDUCTIONS [§246]	<u>1613</u>
3.7. POST REGISTRATION CHANGES	<u>2115</u>
4. VERIFICATION OPINION	<u>2316</u>
5. REFERENCES.....	<u>2517</u>
APPENDIX A – VERIFICATION CHECKLIST	<u>2819</u>
APPENDIX B – VERIFICATION TEAM DETAILS.....	<u>126118</u>



VERIFICATION REPORT – VVSv7.0

1. INTRODUCTION

1.1. OBJECTIVE

Co2balance UK [hereafter, referred as PP] commissioned PJRCES Inc. to undertake the first periodic verification of the registered programme of activities “*Efficient Cook Stove Programme: Kenya*” PoA reference number 5336, covering the monitoring period from 21/03/2012 to 20/03/2013 (both days included). In this monitoring period, verification of 2 CPAs has been considered as below:

1. 5336-0001- Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd (Monitoring period: 21/03/2012 to 20/03/2013) (Both days Included)
2. 5336-0002- Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd (Monitoring period: 31/01/2013 to 20/03/2013) (Both days Included)

The verification has been performed by document review based on the monitoring report for the PoA “*Efficient Cook Stove Programme: Kenya*” version 1.2, dated 08/04/2013 /1/, on-site assessment and interviews with the stakeholders, resolution of outstanding issues and issuance of the verification report. The PoA intends to reduce greenhouse gas (GHG) emissions by displacing traditional ‘three stone’ cook stoves with efficient cook stove which leads to reduce the unsustainable usage of non-renewable biomass in the cooking process.

The report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The objective of CDM verification is to conduct a thorough, independent assessment of the registered project activities. In carrying out its verification work, the DOE shall ensure that the project activity complies with the requirements of paragraph 62 of the CDM modalities and procedures. In particular, this assessment shall:

- Ensure that the project activity has been implemented and operated as per the registered PoA-DD, CPA-DD or any approved revised PoA-PDD and CPA-DD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Ensure that the monitoring report and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs, verifiable, and in accordance with applicable CDM requirements;
- Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan or any revised approved monitoring plan, and the approved methodology including applicable tool(s);
- Evaluate the data recorded and stored as per the monitoring methodology including applicable tool(s).

1.2. SCOPE

The verification scope is defined as an independent and objective review and ex-post determination of the monitored GHG emission reductions. The verification is based on the validated and registered project design document, the monitoring report, emission reduction calculation spreadsheet, and supporting documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.



VERIFICATION REPORT – VVSv7.0

Based on the recommendations of the Validation and Verification Standard version 7.0 (hereafter called “VVSv7.0”), the verification team has employed a risk-based approach in the verification, focusing on the identification of significant risks for project implementation and the generation of emission reductions. Where, no specific means of verification is specified; the verification team has applied the standard auditing techniques as described in the VVSv7.0.

The verification is not meant to provide any consulting service towards the PPs. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3. GHG PROJECT DESCRIPTION

Description of the PoA

PoA Title	:	Efficient Cook Stove Programme: Kenya
Unique Reference No.	:	5336
CPAs Included	:	02
Registration Date	:	21/03/2012
Crediting period	:	21/03/2012 – 20/03/2019
PoA Lifetime	:	28 Years 00 Months [25/12/2010- 24/12/2038]
Project Participant	:	Co2balance UK
Methodology Used	:	AMS-II.G. version 03 “Energy efficiency measures in thermal applications of non-renewable biomass” /15/
Boundary of PoA	:	Host Country i.e Kenya
Coordinating/Managing Entity	:	Co2balance UK
Monitoring Period	:	21/03/2012 to 20/03/2013

Description of the CPA01

CPA Title	:	Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd
CPA Reference No.	:	5336-0001
Date of Inclusion	:	21/03/2012
Methodology Used	:	AMS-II.G. version 03 “Energy efficiency measures in thermal applications of non-renewable biomass” /15/
Start date of CPA	:	21/03/2012
Crediting period of CPA	:	21/03/2012 – 20/03/2019 (Renewable)
CPA Implementer/CPA Operator	:	Co2balance UK
Location of CPA	:	Host Country i.e Kenya
Monitoring Period of CPA	:	21/03/2012 to 20/03/2013

Description of the CPA02

CPA Title	:	Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd
CPA Reference No.	:	5336-0002
Date of Inclusion	:	31/01/2013
Methodology Used	:	AMS-II.G. version 03 “Energy efficiency measures in thermal applications of non-renewable biomass” /15/
Start date of CPA	:	31/01/2013
Crediting period of CPA	:	31/01/2013- 30/01/2020 (Renewable)
CPA Implementer/CPA Operator	:	Co2balance UK



VERIFICATION REPORT – VVSv7.0

Operator	
Location of CPA	: Host Country i.e Kenya
Monitoring Period of CPA	: 31/01/2013 to 20/03/2013

1.4. VERIFICATION TEAM

The verification of the project activity has been carried out by qualified personnel in line with the procedures defined in PJRCES, Inc quality manual for verification and team definition. The verification report has undergone a technical review before requesting issuance of CERs for the CDM project activity. The technical review was performed by an independent technical reviewer.

ROLE OF THE VERIFICATION/ASSESSMENT TEAM								
ASSESSMENT TEAM	ROLE	COMPETENCY			TASK PERFORMED			
		METH EXPERT	TECHNICAL AREA	HOST COUNTRY EXP.	DESK REVIEW	SITE VISIT	REPORT PREPARATION	INDEPENDENT TECH. REVIEW
Ajay Verma	LV/TM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Rohit Badaya	LV/TL	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Siddhartha Nauduri	V/TM			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
Anjana Sharma	ITR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NA			<input checked="" type="checkbox"/>

Note:

1. LV - Lead Verifier, V - Verifier, TL – Team Leader, TM – Team Member, TE – Technical Expert, ITR – Independent Technical Reviewer
2. DR – Desk review of MR and documents, Preparation of Draft verification report, SV – Site visit, RP – Final report preparation and resolution of issues identified during ITR and final approval stage.
3. Technical expert involved has the required Host country knowledge

2. METHODOLOGY

The overall verification, from Contract Review to Verification Report and Verification Opinion, was conducted using internal procedures implemented by PJRCES Inc. In order to ensure transparency, a verification checklist has been customized, in accordance to the provisions of VVSv7.0 of the Clean Development Mechanism, issued by CDM Executive Board at its 79 meeting (EB79, Annex04).

The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The complete verification protocol is enclosed in Appendix A to this report.

2.1. REVIEW OF DOCUMENTS

The assessment of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the monitoring report (MR) and emission reduction calculation spreadsheet. Qualitative information comprises information on internal management controls, calculation



VERIFICATION REPORT – vvsv7.0

procedures, and procedures for transfer of data, frequency of emissions reports, and review and internal audit of calculations.

In-line with Procedures for making the monitoring report available to the public in accordance with §62 of the modalities and procedures for the CDM, monitoring report, v1.2 dated 8 April 2013 /01/ was made publicly available at UNFCCC CDM website.

In addition to the monitoring documentation provided by PP, the verification team reviewed:

- registered PoA-DD v6.3 dated 13 March 2012, revised PoA-DD (ver7.8) dated 24/06/2014 /13/, CPA01-DD v1.7 dated 13 March 2012, revised CPA-DD-1 (ver 2.9) dated 24/06/2014 /14/ and CPA02-DD v4.3 dated 11 January 2013, revised CPA-DD-2 (ver 5.9) dated 24/06/2014 /14/,
- applied monitoring methodology AMS IIG v3.0 /03/
- relevant decisions, clarifications and guidance from CMP and CDM Executive Board

A complete list of documents reviewed by the verification team is listed in section 5 of present report under **References**.

Key changes in the final version (ver1.12) of the monitoring report /1/ as compared to that webhosted on UNFCCC CDM website is summarized in the table given below:

- The version of the webhosted Monitoring report template was 3.1, while the latest final Monitoring report has been prepared under the version 04.0 of the Monitoring report template available on the UNFCCC website.
- Change in monitoring period mentioned in the webhosted MR. The monitoring period considered for both the CPAs (CPA01 and CPA02) was 21/03/2013 to 20/03/2013 in the webhosted MR. The same was corrected to (21/03/2012-20/03/2013) and (31/01/2013-20/03/2013) for CPA01 and CPA02 respectively in the revised final Monitoring report.
- Addition and correction in tools, guideline names and applied methodology version. The tools, standard and guidelines used in the project activity have now been indicated in the Section A.4 of revised final Monitoring report.
- The technical description was not sufficiently provided in the webhosted MR version 1.2. The complete technical description has now been provided under Section B.1 of the revised final Monitoring report.
- Additional relevant information on the parameters fixed ex-ante ($B_{\text{average use}}$) has now been provided in the revised final version of the Monitoring report.
- The description on the description, monitoring frequency has now been corrected for the parameters involved in the monitoring. The new parameter " $B_{y, \text{baseline tech}}$ " has now been included in the revised final monitoring report.
- The sampling plan has now been explained in detail under Section D.3 of the revised final monitoring report.
- Correction in representation of emission reductions throughout the final monitoring report. The emission reductions are revised from 29,619 to 17,208 tCO₂ for CPA-1 and from 1,533 tCO₂ to 1129 tCO₂ in the revised final monitoring report.

2.2. SITE VISIT & FOLLOW UP INTERVIEWS

The site visit was carried out between 1st May 2013 to 7th May 2013. PJRCES verification team interviewed project stakeholders to confirm the selected information mentioned in table below. Representatives of Co2balance and the owners of individual households included in the project activity were interviewed. A meeting was held on 7th May 2013 at Co2balance office between Co2balance officials and PJRCES verification team to resolve issues identified in the document review and project activity site visit.

The main topics of the interviews are summarised in the table below.



VERIFICATION REPORT – VVSv7.0

SL. No	DATE	NAME	ORGANIZATION	TOPIC
/01/	1st May 2013	Richard Illiffe, Senior Project Developer	Co2balance UK	<ul style="list-style-type: none"> • Discussion regarding the baseline survey and monitoring plan • Document review • Production Process of ICS • Technology involved in ICS • Types of ICS • Location of sampled improved Cook stoves • Training of PO employees • WBT procedure and how it is conducted • Sampling plan adopted • Survey questionnaire • Calibration of monitoring Equipments • Interview with the Stakeholders • Project boundary issues • Sustainable development criteria
		Jack Otieno, Project Co-ordinator	Co2balance UK	
/02/	4 May 2013	Lenice Ojwang	Co2balance UK	<ul style="list-style-type: none"> • Discussion regarding the baseline survey and monitoring plan
		Samuel Kiplimo	Co2balance UK	
/03/	2 May 2013	1. Pamela Jepkorir 2. Danson Kemboi 3. Eunice Keptum 4. Gadis Jeruto 5. Rad Kiprop	Cook stoves Owners Village: Kaptega Sublocation: Chepkorio Eldoret East and Keiyo Districts	<ul style="list-style-type: none"> • Type of Fuel type used. • Fuel used, bought or collected. • Uses of cookstoves
/04/	4 May 2013	1. Esther kiptanui 2. Jerono Sambhu 3. Annarotich 4. Moses Kurgate 5. Essther Sangok	Cook stove owners Village: Lamaiyo Sublocation: Flex, Mathira East District	<ul style="list-style-type: none"> • Type of Fuel type used. • Fuel used, bought or collected. • Uses of cookstoves

2.3. RESOLUTION OF CARs, CLs & FARs

The objective of this phase of the verification is to resolve issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions prior to PJRCES Inc.'s positive conclusion on the GHG emission reduction calculation.



VERIFICATION REPORT – VVSv7.0

Findings established during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

A **Corrective Action Request (CAR)** is raised, if one of the following situations occurs:

- Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

A **Clarification Request (CL)** is raised, if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A **Forward Action Request (FAR)** is raised, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in **Appendix A**.

2.4. INTERNAL QUALITY CONTROL

Following the completion of the assessment process and a recommendation by the verification team, all documentation will be forwarded to an Independent Technical Reviewer. The task of the Independent Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Independent Technical Reviewer may either accept or reject the recommendation made by the verification team. Findings can be raised at this stage and PP must address the same within agreed timeline.

3. VERIFICATION CONCLUSIONS

In the following sections, the conclusions of the verification activity have been stated. The findings of the desk review of the original monitoring documents and the findings from interviews during the follow up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 07 CARs; 08 CLs and 00 FARs for CPA1 and in 07 CARs; 07 CLs and 00 FARs for CPA2.

The CARs/ CLs/ FARs were closed based on the adequate responses from PP, which met the applicable requirements. They have been reassessed before their formal acceptance and closure.

3.1. REMAINING ISSUES FROM VALIDATION OR PREVIOUS VERIFICATION(S) [§330]

No issues are remaining from the validation of project activity. Since this is the first verification and hence there are no issues from any previous verification.



VERIFICATION REPORT – VVSv7.0

3.2. COMPLIANCE WITH THE PROJECT IMPLEMENTATION WITH THE REGISTERED PROJECT DESIGN DOCUMENT [§271]

Implementation & operation status:

The project activity involves distribution of domestic fuel-efficient cooking stoves by the co2balance UK to rural households in Eldoret East and Keiyo Districts (CPA 1) Mathira East District (CPA 2). The usage of efficient cook stoves lead to savings in wood consumption in comparison to wood consumed in the baseline cook stoves (3-stone). The stoves are manufactured in Kenya and one cook stove is installed in each household for free of cost in exchange of carbon emission reduction rights.

During this 1st periodic verification, verification team found that the actual project scenario and project implementation was not completely in line with the description as provided in the registered PoA-DD and CPA-DDs (CPA-DD-1 & CPA-DD-2). Since these changes were permanent in nature, hence DOE on behalf of PP requested for approval on changes in the registered documents as post-registration changes (Ref. No: PRC-5336-001) to be in line with the actual scenario at the project site. In accordance with the relevant regulations, the Board considered the request for post-registration changes in the registered documents during EB Meeting 80 and agreed to permit the post-registration changes of the PoA.

A total of 15626 cook stoves were installed in year 2011 and 2 stoves were installed during the year 2012 (under CPA 01) /11/. The drop off rate for the cook stoves was calculated to be 4% during this monitoring period /11/. Hence the total installed stove in operation comes out as $15,628 \times 0.96 = 14,972$ cook stoves during the monitoring period. Further the baseline stoves (3-stone) were found to be still in use in some households during the monitoring period. The wood consumption (33%) due to the continued use of the baseline stoves have been subtracted in the estimation of final wood savings /11/.

A total of 4046 cook stoves were installed in year 2011 (under CPA 02). The drop off rate for the cook stoves was calculated to be 2% during this monitoring period /11/. Hence the total installed stoves in operation come out as $4,046 \times 0.98 = 3,979$ cook stoves during the monitoring period. Further the baseline stoves (3-stone) were found to be still in use in some households during the monitoring period. The wood consumption (16%) /11/ due to the continued use of the baseline stoves have been subtracted in the estimation of final wood savings.

PJRCES visited the households during site visit, It was observed that each stove was assigned a unique serial number comprising of stove type, project location and stove number. The unique serial number on each stove, personal information of stove owners and construction date of stove was cross checked with the database available with the project participant. The operation of the cook stoves was confirmed through interviews of stove owners during the site visit.

Based on the physical site inspection carried out between 1 May 2013 to 7 May 2013, PJRCES verification team was able to confirm following:

- The CPA(s) are implemented within the boundary of the PoA as described in the revised registered PoA-DD.
- The CME is same as that mentioned in the registered PoA-DD
- The implementation and operation of the project activity has been conducted in accordance with the description contained in the revised registered PoA-DD and included CPA-DDs (CPA-DD-1 & CPA-DD-2).

PJRCES has, by means of a desk review and an on-site visit, assessed that:

- all physical features of the CPA proposed in the included CPA-DDs are in place
- the project participants/CPA implementers have operated the CPAs as per the included CPA-DDs (CPA-DD-1 & CPA-DD-2).



VERIFICATION REPORT – vvsv7.0

PJRCES confirms that this CPA is phased implemented and that the phased implementation is in line with the registered CPA-DDs.

3.3. COMPLIANCE OF MONITORING PLAN WITH THE MONITORING METHODOLOGY INCLUDING APPLICABLE TOOL(S) AND THE STANDARDIZED BASELINE [§274]

PJRCES has determined that the project implementation is in accordance with the provisions of the included revised CPA-DD(s) and revised registered PoA and has also verified that the revised validated monitoring plan is in accordance with the approved methodology - (AMS-IL.G. version 03 “Energy efficiency measures in thermal applications of non-renewable biomass) /15/ applied by the proposed CDM project activity. The following guidance and guidelines has been correctly applied to the project activity.

1. Standard: Sampling and surveys for CDM project activities and Programme of Activities (version 04.1)
2. Guideline: Sampling and surveys for CDM project activities and programme of activities” version 03.0.
3. KfW Sampling Manual: A guide to sampling under the CDM with special focus to POAs (First Edition)

The revised registered monitoring plan calls for monitoring of the following variables:

1. $N_{y,i}$: Number of stove in operation during the verification period. *As per the applied methodology, the stoves or a representative sample shall be checked at least once in a year if they are still operating or are replaced by an equivalent in service appliance.* The number of cook stove in operation was monitored through the Usage survey /11/ carried out for 142 and 122 households for CPA 01 and CPA 02 respectively. A sample size of 142 and 122 was determined following the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/. For CPA 01, the drop off rate was estimated as 4% and hence the total number of cook stove in operation during the monitoring period equals to $15,628 \times 0.96 = 14,972$. For CPA 02, the drop off rate was estimated to be 2% and hence the total number of cook stove in operation during the monitoring period equals to $4,046 \times 98\% = 3979$. As per the applied methodology, *atleast biennial monitoring is required*, hence the annual monitoring for the CPA 01 and CPA 02 during the monitoring period was considered appropriate for the project activity. Hence this monitoring parameter meets the monitoring requirement of the applied methodology.
2. $n_{new,i}$: Thermal efficiency of the project stove. *As per the applied methodology, the efficiency of the cook stove shall be monitored.* For monitoring the thermal efficiency of cook stove, water boiling test through the equipments (Thermometer, weighing scales, and moisture content meters) was carried out during the monitoring period. The water boiling test was carried out for 21 and 22 households for CPA 01 and CPA 02 respectively. A sample size of 21 and 22 was determined following the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/. The measured value of the thermal efficiency during the monitoring period for the CPA 01 and CPA 02 arrives as 32.67% and 25.01% respectively. As per the applied methodology, *atleast biennial monitoring is required*, and hence the monitoring requirements of thermal efficiency are met by the project activity in line with the methodology.
3. $f_{NRB,y}$: Fraction of the biomass that is used in the project area confirmed to be non renewable. The value of parameter considered in the calculations is 0.92 for the current monitoring period. As per the applied methodology, the $f_{NRB,y}$ shall be calculated with the *help of nationally approved methods (e.g surveys or government data if available)*. PP has carried out an independent assessment of f_{NRB} based on the data from FAO Forest Resource Assessment 2010, Kenya (<http://www.fao.org/docrep/004/Y1997E/y1997e21.htm#bm73>) /19/. The Food and Agriculture Organisation of the United Nations (FAO) is an intergovernmental



VERIFICATION REPORT – vvsv7.0

organisation and the data is based on the surveys which is authentic. The value of fNRB arrives as 0.92.

The same value has also been accepted by the Designated Authority of Kenya. The same has been verified through the UNFCCC website with the following weblink /19/.

<http://cdm.unfccc.int/DNA/fNRB/index.html>

This has further been confirmed through the “Acceptance form for the fraction of non-renewable biomass, version 01.1”. The “National Environment Management Authority” (NEMA) on behalf of Designated National Authority of Kenya has accepted the default values for fNRB published in EB 67 Annex22. This can again be verified through the following weblink /19/.

<http://cdm.unfccc.int/DNA/fNRB/docs/kenya.pdf>

4. $B_{y, \text{baseline tech}}$: Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity. As per the paragraph 20 of the applied methodology, *if the baseline stoves continue to be used, monitoring shall ensure that the fuel-wood consumption of those stoves is excluded from B_{old}* . The project activity continues to use baseline cook stoves and hence the fuel wood consumption in baseline cook stove has been monitored. The total wood consumption for project activity has been adjusted with the wood consumption in baseline cook stoves. Through the Usage survey carried out, the fuel wood consumption of baseline stoves under CPA 01 has been calculated as 2.43 tonnes/household/year. The fuel wood consumption of baseline stoves under CPA 02 has been calculated as 1.98 tonnes/household/year. Hence the requirement of the applied methodology has been met by the project activity during monitoring period.

For details relating to this section, please refer to the Verification Protocol in Appendix A – Verification Checklist section 4. PJRCES confirms that the monitoring plan(s) is in accordance with the approved methodology applied by the included CPA(s) and revised registered PoA.

3.4. COMPLIANCE OF MONITORING ACTIVITIES WITH THE REGISTERED MONITORING PLAN [§278]

The monitoring has been carried out in accordance with the monitoring plan in the included revised CPA-DDs (CPA-DD-1 & CPA-DD-2). All parameters have been monitored and reported in line with the revised registered monitoring plan. Monitoring report lists each of the parameter required by the monitoring plan and the information flow (i.e. data generation, aggregation, recording, calculation and reporting) for all these parameters.

The revised registered monitoring plan calls for monitoring of the following variables:

1. $N_{y,i}$: Number of stoves in operation during the verification period. The number of stove in operation is determined through the usage survey. In line with the revised monitoring plan of the included revised CPA-DD-1 version 2.9 dated 24/06/2014 and CPA-DD-2 version 5.9 dated 24/06/2014 /14/, the data has been sourced from the monitoring database. The database includes information on cook stove based on the unique serial number comprising of stove type, project location and stove number. The database also contains the information on cook stove and personal information of stove owners. The number of cook stoves in operation were monitored through the Usage survey /11/ carried out for 142 and 122 households for CPA 01 and CPA 02 respectively. A sample size of 142 and 122 was determined following the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/. For CPA 01, the drop off rate was estimated as 4% and hence the total number of cook stove in operation during the monitoring period found to be $15,628 \times 0.96 = 14,972$. For CPA 02, the drop off rate was estimated to be 2% and hence the total number of cook stove in operation during the monitoring period found to be $4,046 \times 98\% = 3979$. Thus the monitoring of this parameter is in line with the registered monitoring plan.



VERIFICATION REPORT – vvsv7.0

2. $n_{new,i}$: Thermal efficiency of the project stove. For monitoring the thermal efficiency of cook stove, water boiling test through the equipments (Thermometer, weighing scales, and moisture content meters) was carried out during the monitoring period. In line with the monitoring plan of the included CPA-DD-1 version 2.9 dated 24/06/2014 and CPA-DD-2 version 5.9 dated 24/06/2014 /14/, the data has been sourced from the annual efficiency test (water boiling test carried out during the monitoring period) reports during the monitoring period. The water boiling test was carried out for 21 and 22 households for CPA 01 and CPA 02 respectively. A sample size of 21 and 22 was determined following the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/. The measured value of the thermal efficiency during the monitoring period for the CPA 01 and CPA 02 arrives as 32.67% and 25.01% respectively. Thus the monitoring of this parameter is in line with the registered monitoring plan.

3. $f_{NRB,y}$: Fraction of the biomass that is used in the project area confirmed to be non renewable. In line with the monitoring plan of the included revised CPA-DD-1 version 2.9 dated 24/06/2014 and CPA-DD-2 version 5.9 dated 24/06/2014 /14/, the parameter has been sourced from an independent report. PP has carried out an independent assessment of fNRB based on the data from FAO Forest Resource Assessment 2010, Kenya (<http://www.fao.org/docrep/004/Y1997E/y1997e21.htm#bm73>) /19/. The Food and Agriculture Organisation of the United Nations (FAO) is an intergovernmental organisation and the data is based on the surveys which is authentic. The value of fNRB arrives as 0.92.

The same value has also been accepted by the Designated Authority of Kenya. The same has been verified through the UNFCCC website with the following weblink /19/.

<http://cdm.unfccc.int/DNA/fNRB/index.html>

This has further been confirmed through the “Acceptance form for the fraction of non-renewable biomass, version 01.1”. The “National Environment Management Authority” (NEMA) on behalf of Designated National Authority of Kenya has accepted the default values for fNRB published in EB 67 Annex22. This can again be verified through the following weblink /19/.

<http://cdm.unfccc.int/DNA/fNRB/docs/kenya.pdf>

Thus the monitoring of this parameter is in line with the registered monitoring plan.

4. $B_{y,baseline\ tech}$: Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity. The project activity continues to use baseline cook stoves and hence the fuel wood consumption in baseline cook stove has been monitored. In line with the monitoring plan of the included CPA-DD-1 version 2.9 dated 24/06/2014 and CPA-DD-2 version 5.9 dated 24/06/2014 /14/, the value of the fuel wood consumption per appliance of baseline stove has been sourced from the Kitchen Performance Tests (KPT) and the Usage surveys carried out during the monitoring period. The total wood consumption for the project activity has been adjusted with the wood consumption in baseline cook stoves. Through the Usage survey carried out, the fuel wood consumption of baseline stoves under CPA 01 has been calculated as 2.43 tonnes/household/year. The fuel wood consumption of baseline stoves under CPA 02 has been calculated as 1.98 tonnes/household/year. Hence the requirement of the applied methodology has been met by the project activity during monitoring period.

Hence PP has monitored all the parameters in line with the registered monitoring plan.

PJRCES has confirmed that:

1. The monitoring plan(s) and the applied methodology has been properly implemented and followed by the project participants/CPA implementers.
2. All parameters stated in the monitoring plan, the applied methodology and relevant CDM Executive Board decisions, have been sufficiently monitored and updated as applicable, including:
 - (a) project emission parameters
 - (b) baseline emission parameters
 - (c) leakage parameters



VERIFICATION REPORT – VVSv7.0

- (d) management and operational system
- 3. Monitoring results are consistently recorded as per approved frequency
- 4. Quality assurance and quality control procedures have been applied in accordance with the monitoring plan.

For details relating to this section, please refer to the Verification Protocol in Appendix A – Verification Checklist section 4 & 5.

PJRCES confirms that monitoring has been carried out in accordance with the monitoring plan(s) contained in the included revised CPA-DD(s).

The list in the Verification Protocol – Appendix A – Verification Checklist section 4 & 5, shows each parameter required by the monitoring plan, and clearly states how PJRCES has verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters, including the values in the Monitoring Report.

3.5. COMPLIANCE WITH THE CALIBRATION FREQUENCY REQUIREMENTS FOR MEASURING INSTRUMENTS [§282]

There are no Calibration requirements as per the registered revised monitoring plan in the PoA-DD version 7.8 dated 24/06/2014, included CPA-DD-1 version 2.9 dated 24/06/2014 and CPA-DD-2 version 5.9 dated 24/06/2014. The applied methodology AMS II G, version 03 has also been cross checked and confirmed that there are no calibration requirements for the project activity during monitoring period.

PJRCES has determined that the sampling has been conducted in accordance with the specified sampling plan in the CPA-DD and PoA-DD.

3.6. ASSESSMENT OF DATA AND CALCULATION OF EMISSION REDUCTIONS [§289]

3.6.1. COMPLETENESS OF MONITORING DATA

As required by the included revised CPA-DDs (CPA-DD-1 & CPA-DD-2), the following parameters are being monitored.

1. Ny,i: Number of stoves in operation during the verification period:
PP carried the Usage survey for the 142 and 122 households for CPA 01 and CPA 02 respectively based on sample size to confirm the operation of Cook stoves during the monitoring period. A sample size was determined following the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/. The following equation was used for calculating the sample size.

$$n \geq \frac{z^2 \times N \times V}{(N-1) \times \text{precision}^2 + z^2 \times V}$$

where

$$V = \frac{p(1-p)}{p^2}$$

n is the Sample size,

N is the total number of households.

Z is the constant referring to the confidence level of 90%.

The following data have been used for the above parameters for CPA 01 and CPA 02.

Parameter	Value
-----------	-------



VERIFICATION REPORT – VVSv7.0

N	The value of 15636 and 4046 is used for CPA 01 and CPA 02 respectively for the sample size calculations. This is based on the total number of stoves in distribution record.
Z	The value of 1.645 has been used in the sample size calculations. This constant is based on the 90% confidence level required for these sample size calculations. This is in line with the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/.
V	For CPA 01 and CPA 02, this has been calculated with the formula $V = \frac{p(1-p)}{p^2}$ <p>Where p is the expected proportion. PP has calculated the value based on “2012 04 02 Pre sampling surveys US CPA 1” /12/ and “2012 04 02 Pre sampling surveys US CPA 2” /12/. For CPA 01, the value of p is 75% and for CPA 02, the value is 97%. After the calculations, the value of V comes out as a 0.33 for CPA 01 and 0.03 for CPA 02.</p>
n	Based on the calculations, the value of n comes as 89.69 for CPA 01 and 85.57 for CPA 02.

PP has further considered a buffer factor of 63% and 70% for CPA 01 and CPA 02 respectively to compensate for the non-response of the households during the survey. PP has calculated the buffer factor based on “2012 04 02 Pre sampling surveys US CPA 1” /12/ and “2012 04 02 Pre sampling surveys US CPA 2” /12/.

Considering the buffer factor as mentioned above, the Sample size for CPA 01 and CPA 02 comes out as 142 and 122 respectively. PJRCES has checked the calculations on sample size with the calculations provided in the Excel sheet by project participant and found correct.

2. n_{new,i}: Thermal efficiency of the project stove: The thermal efficiency of the project stove is being monitored with the help of project Water Boiling Test (WBT). PP carried the Usage survey for the 21 and 22 households for CPA 01 and CPA 02 respectively based on sample size to obtain the data for Water boiling test. The sample size was determined following the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/.

The following equation was used for calculating the sample size.

$$n \geq \frac{z^2 \times N \times V}{(N-1) \times \text{precision}^2 + z^2 \times V}$$

Where:

$$V = \left(\frac{SD}{mean} \right)^2$$

n is the Sample size,

N is the total number of households.

Z is the constant referring to the confidence level of 95%.

The following data have been used for the above parameters for CPA 01 and CPA 02.

Parameter	Value
N	The value of 15636 and 4046 is used for CPA 01 and CPA 02 respectively for the sample size calculations. This is based on the total number of stoves in distribution



VERIFICATION REPORT – VVSv7.0

	record.
Z	The value of 1.96 has been used in the sample size calculations. This constant is based on the 95% confidence level required for these sample size calculations. This is in line with the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/.
V	<p>For CPA 01 and CPA 02, the parameter V has been used</p> <p>Where:</p> $V = \left(\frac{SD}{mean} \right)^2$ <p>Where SD is the Standard deviation of the parameter that is expected in the total population. Where Mean is the Average efficiency taken from test results in stove specifications and building materials. The choice of data is appropriate for sampling as this was an independent study and the only data at that time to calculate the mean. The value of SD comes out as 3.21 for both CPA 01 and CPA 02. The value of Mean comes out as 34.67% for both CPA 01 and CPA 02. After the calculations, the value of V comes out as a 0.01 for CPA 01 and CPA 02.</p>
n	Based on the calculations, the value of n comes as 13.20 for CPA 01 and 13.17 for CPA 02.

PP has further considered a buffer factor of 65% and 60% for CPA 01 and CPA 02 to compensate for the non-response of the households during the survey PP has calculated the value based on “2012 04 02 Pre sampling surveys WBT CPA 1” /12/ and “2012 04 02 Pre sampling surveys WBT CPA 2” /12/.

Considering the buffer factor as mentioned above, the Sample size for CPA 01 and CPA 02 comes out as 21 and 22 respectively. PJRCES has checked the calculations on sample size with the calculations provided in the Excel sheet by project participant and found correct.

3. f_{NRB,y}: Fraction of the biomass that is used in the project area confirmed to be non renewable:

PP has carried out an independent assessment of fNRB based on the data from FAO Forest Resource Assessment 2010, Kenya (<http://www.fao.org/docrep/004/Y1997E/y1997e21.htm#bm73>) /19/. The Food and Agriculture Organisation of the United Nations (FAO) is an intergovernmental organisation and the data is based on the surveys which is authentic. The value of fNRB arrives as 0.92.

The same value has also been accepted by the Designated Authority of Kenya. The same has been verified through the UNFCCC website with the following weblink /19/.

<http://cdm.unfccc.int/DNA/fNRB/index.html>

This has further been confirmed through the “Acceptance form for the fraction of non-renewable biomass, version 01.1”. The “National Environment Management Authority” (NEMA) on behalf of Designated National Authority of Kenya has accepted the default values for fNRB published in EB 67 Annex22. This can again be verified through the following weblink /19/.

<http://cdm.unfccc.int/DNA/fNRB/docs/kenya.pdf>

4. B_{y,baseline tech}: Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity: The project activity continues to use baseline cook stoves and hence the fuel wood consumption in baseline cook stove has been monitored. The value of the fuel wood consumption per appliance of baseline stove has been sourced from the Kitchen Performance Tests (KPT) and the Usage surveys carried out during the monitoring period. The total wood consumption during the monitoring period has been adjusted with the wood consumption in baseline cook stoves. Through the Usage survey carried out, the fuel



VERIFICATION REPORT – VVSv7.0

wood consumption of baseline stoves under CPA 01 has been calculated as 2.43 tonnes/household/year. The fuel wood consumption of baseline stoves under CPA 02 has been calculated as 1.98 tonnes/household/year.

PJRCES has confirmed through the site visit and subsequent review of the documents that

1. A complete set of data for the specified monitoring period is available
2. Information provided in the monitoring report is correct which has been cross-checked with the supporting documents submitted by project participant during the course of verification.
3. Calculations of baseline emissions, project emissions from the CPA(s) and leakage, as appropriate, have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document.
4. Emission factor of fossil fuel for the substitution of non-renewable woody biomass and value for the fNRB, and other reference values have been correctly applied.

PJRCES confirms that appropriate methods and formulae for calculating baseline emissions, projects emissions and leakage have been followed. PJRCES is of the opinion that all assumptions, emissions factors and default values that were applied in calculations have been justified.

3.6.2. DATA FLOW

This co2balance stove project employed stove contractors for stove construction. The stove materials were manufactured in Kenya and delivered to a location central to the project area. The materials were then distributed from this central location to the individual households for stove construction. During the construction process, co2balance employees collected stove data, performed quality control checks of the constructed stove, collected carbon handover sheets, and educated stove recipients on proper usage.

The parameter N_y (number of stoves in operation during the verification period) was monitored by PP through the households visits (Usage survey) of the randomly selected households comprising the sample. The information on cook stoves has been stored in the monitoring database. The database includes information on cook stove based on the unique serial number comprising of unique ID (stove type, project location and stove number), photograph of each cook stove and personal information of stove owners. PJRCES has cross checked the records during the site visit and found to be in order.

The parameter $N_{new,y}$ (thermal efficiency of the project stove) was monitored through performing Water Boiling Test (WBT) /3/ on a randomly selected sample of cook stoves. It was confirmed that all the WBTs were conducted by the well-trained staff, with prior experience conducting WBTs and recording the results. The WBTs were performed in the field and the results were recorded. The data was uploaded to an electronic information management system. The measurement methods, equipments were checked during the site visit by PJRCES. PJRCES verified the test results during the site visit and found to be correct.

The parameter $B_{y,baseline\ tech}$ was monitored through performing the Usage surveys /11/ on a randomly selected sample of households participating in the CPA. The data was uploaded to an electronic information management system. PJRCES checked the survey methods and records during the site visit and found to be in order. It was also confirmed that the survey was conducted by the well-trained staff.

All the data obtained has been gathered by the data collection team. The original hard copies of the data have been achieved and data is also archived through electronic means. All the emission reduction related calculations are performed by the Carbon project officer, who is also responsible for the documentation and monitoring.



VERIFICATION REPORT – vvsv7.0

PJRCES has checked the hard copy and digital records during the site visit. The project developer, project coordinator, stove contractors, cook stove owners were interviewed during the site visit on the data flow and process. It has been confirmed that the PP has well designed flow of data system with relevant QA/QC checks at various points.

PJRCES has confirmed that the :

- Data used for the determination of the emission reductions are available and monitored in accordance with the monitoring plan contained in the revised registered CPA-DD.
- Information and data provided in the monitoring report have been cross-checked with various sources and which were also confirmed during the site visit.

3.6.3. CALCULATION OF EMISSION REDUCTIONS [§289]

Verification team, in accordance with the applied methodology AMS IIG v3.0 /03/ undertook the evaluation of calculations applied in order to calculate the emission reductions during the current monitoring period.

Emission Reductions:

In-line with paragraph 5 of applied methodology AMS IIG version 03, emission reductions during the monitoring period have been calculated as:

$$ER_y = B_{y,savings} * f_{NRB,y} * NCV_{biomass} * EF_{projected_fossilfuel}$$

where:

ER_y = Emission reductions during the current monitoring period from 21 March 2012 to 20 March 2013 in tCO₂e/year

$B_{y,savings}$ = Quantity of woody biomass that is saved in tonnes. The Quantity of woody biomass that is saved is calculated based on the Option 2 (paragraph 6 of the applied methodology). The saved biomass is calculated based on the Quantity of woody biomass used in the absence of project activity, efficiency of the system being replaced and efficiency of system being deployed as part of the project activity.

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

The calculations of savings of woody biomass for CPA 01 and CPA 02 are as follows.

CPA 01

The B_{old} (3.98 tonnes/stove/year) per households has been estimated from the baseline KPT. This value has been corrected for the continued use of biomass (2.43 tonnes/stove/year) in baseline stoves in the project activity. Further the number of stoves installed under project activity (15628) has been corrected for the drop off rate (4%). The values have been obtained from the Usage survey carried for the project activity during the monitoring period. Hence the total baseline wood consumption is calculated as follows:

$$B_{old} \text{ (less drop off and baseline use)}: 15628 * 0.96 * (3.98 - 2.43) = 23184 \text{ tonnes/year}$$

In line with the paragraph 23 of the applied methodology, PP has applied gross adjustment factor of 0.95 to account for leakages. B_{old} becomes equal to $23184 * 0.95 = 22024$ tonnes/year. Considering the default efficiency of the baseline stove as 10% and efficiency of cook stove installed under project activity as 32.66%, the wood savings ($B_{y,savings}$) has been calculated as:
 $= 22024 * [1 - (10/32.66)] = 15282.561$ tonnes/year.



VERIFICATION REPORT – VVSv7.0

CPA 02

The B_{old} (5.14 tonnes/stove/year) per households has been estimated from the baseline KPT. This value has been corrected for the continued use of biomass (1.97 tonnes/stove/year) in baseline stoves in the project activity. Further the number of stoves installed under project activity (4046) has been corrected for the drop off rate (2%). The values have been obtained from the Usage survey carried for the project activity during the monitoring period. Hence the total baseline wood consumption is calculated as follows:

$$B_{old} \text{ (less drop off and baseline use): } 4046 * 0.98 * (5.14 - 1.97) = 12579.76 \text{ tonnes/year}$$

In line with the paragraph 23 of the applied methodology, PP has applied gross adjustment factor of 0.95 to account for leakages. B_{old} , hence becomes equal to $12579.76 * 0.95 = 11950.77$ tonnes/year. Considering the default efficiency of the baseline stove as 10% and efficiency of cook stove installed under project activity as 25.01%, the wood savings ($B_{ysavings}$) has been calculated as:
 $= 11950.77 * [1 - (10/25.01)] = 7172.72$ tonnes/year.

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

$NCV_{Biomass}$ is the Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne)

$EF_{projected_fossilfuel}$ is the emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 t CO₂/TJ

PJRCES has verified the following data and estimation of emission reduction for both of CPAs.

Parameters	Units	For 5336-0001 (CPA 1)	For 5336-0002 (CPA 2)
B y, savings	Tonnes	15282.56	7172.72
f_{NRB}	-	0.92	0.92
EF	tCO ₂ /TJ	81.6	81.6
NCV	TJ/tonne	0.015	0.015
ER	tCO ₂ /Year	17209.38	8077.06
Number of Stoves		15628	4046
Emission reduction per stoves	tCO ₂ /Year/Stove	1.1011	1.9963

PJRCES has verified the following emission reduction for both of CPAs:

	Monitoring period	Emission Reductions , tCO ₂
For 5336-0001 (CPA 1)	21 March 2012 to 20 March 2013	17208
For 5336-0002 (CPA 2)	31 January 2013 to 20 March 2013	1129
Total ERs		18337

Verification team, in-line with §290(c,d,e) of VVS, v7.0; confirms that formulae, assumptions and default emission factors used in the emission reduction calculation are reasonable and are in line with the approved monitoring methodology and the monitoring plan and therefore, leads to the conservative estimation of emission reductions.

3.7. POST REGISTRATION CHANGES

3.7.1. TEMPORARY DEVIATION FROM REGISTERED MONITORING PLAN AND/OR MONITORING METHODOLOGY [§300 – §301]



VERIFICATION REPORT – vvsv7.0

Not Applicable

3.7.2. CORRECTIONS [§304]

Not Applicable

3.7.3. CHANGES IN THE START DATE OF CREDITING PERIOD [§306]

Not Applicable

3.7.4. PERMANENT CHANGES FROM THE REGISTERED MONITORING PLAN, MONITORING METHODOLOGY OR STANDARDIZED BASELINE [§307-§313]

During this 1st periodic verification, verification team found that the actual monitoring plan was not completely in line with the description as provided in the registered PoA-DD and CPA-DDs (CPA-DD-1 & CPA-DD-2). Since these changes were permanent in nature, hence DOE on behalf of PP requested for approval on changes in the registered documents as post-registration changes (Ref. No: PRC-5336-001) to be in line with the actual scenario at the project site. In accordance with the relevant regulations, the Board considered the request for post-registration changes in the registered documents during EB Meeting 80 and agreed to permit the post-registration changes of the PoA. The revision in the monitoring plan includes revision in sample size calculations (for parameters N_y , $n_{new,i}$, $B_{y,baseline\ tech}$) to be in line with the “Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0 /18/, revising the source of Leakage correction factor, revising the monitoring frequency to once every year for the parameter ($N_{y,i}$), providing the monitoring frequency for the parameter ($n_{new,i}$) as biennial, revising the ex-ante value of fNRB to 0.92, revising the monitoring frequency of parameter ($B_{y,baseline\ tech}$) to annual in the revised PoA-DD (ver7.8) dated 24/06/2014 and CPA-DD documents (CPA-DD-1 (ver 2.9) dated 24/06/2014 and CPA-DD-2 (ver5.9) dated 24/06/2014).

3.7.5. CHANGES TO THE PROJECT DESIGN OF A REGISTERED PROJECT ACTIVITY [§314-§328]

During this 1st periodic verification, verification team found that the actual project design was not completely in line with the description as provided in the registered PoA-DD and CPA-DDs (CPA-DD-1 & CPA-DD-2). Since these changes were permanent in nature, hence DOE on behalf of PP requested for approval on changes in the registered documents as post-registration changes (Ref. No: PRC-5336-001) to be in line with the actual scenario at the project site. In accordance with the relevant regulations, the Board considered the request for post-registration changes in the registered documents during EB Meeting 80 and agreed to permit the post-registration changes of the PoA. PP has revised the Demonstration justification in line with the latest “Guidelines on the demonstration of additionality of small-scale project activities, ver09 (EB 68 Annex 27)”. Further the ex-ante estimation of emission reductions has been corrected in the revised PoA-DD (ver7.8) dated 24/06/2014 and CPA-DD documents (CPA-DD-1 (ver 2.9) dated 24/06/2014 and CPA-DD-2 (ver5.9) dated 24/06/2014).



VERIFICATION REPORT – vvs7.0

4. VERIFICATION OPINION

Perry Johnson Registrars Carbon Emissions Services, Inc (PJRCES) has performed verification of emission reductions reported from CDM Programme of activity, “*Efficient Cook Stove Programme: Kenya*” (UNFCCC Ref No:5336.) along with CDM Programme of activities “*Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd*” (UNFCCC Ref No 5336-0001) and “*Efficient Cook Stove Programme: Kenya CPA No. 2 Mathira East District co2balance UK Ltd*” (UNFCCC Ref No 5336-0002) included in PoA covering the period starting from 21st March 2012 to 20 March 2013 (both days included).

PP was responsible for collection of data and reporting GHG emission reductions on the basis set out within the monitoring plan contained in revised registered CPA1-DD v2.9 dated 24/06/2014, CPA2-DD v5.9 dated 24/06/2014 and monitoring report v1.12 dated 29/07/2014. The programme of activity applies AMS II G “*Energy efficiency measures in thermal applications of non-renewable biomass*” version 3.0.

The verification consisted of the following three phases: i) desk review of the project design, the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. PJRCES Inc. also requested for evidences, relevant information and explanations that were considered necessary to give a reasonable assurance of the reported emission reductions.

PJRCES confirms that the project has been implemented as described in validated and revised registered CPA-DDs. Based on information we have verified, we confirm following:

PoA Title	<i>Efficient Cook Stove Programme: Kenya</i> (UNFCCC Ref No:5336.)
Registered PoA-DD used for Verification	Version 7.8 dated 24/06/2014
CPA Included	1. Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd” (UNFCCC Ref No 5336-0001), revised registered CPA-DD-1 v2.9 dated 24/06/2014. 2. Efficient Cook Stove Programme: Kenya CPA No. 2 Mathira East District co2balance UK Ltd” (UNFCCC Ref No 5336-0002), revised registered CPA-DD-2 v5.9 dated 24/06/2014.
Methodology Used for Verification	AMS II G “ <i>Energy efficiency measures in thermal applications of non-renewable biomass</i> ” version 3.0.
Applicable Monitoring period	[21 st March 2012 to 20 th March 2013] for CPA1 [31 st January 2013 to 20 th March 2013] for CPA2

Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, PJRCES Inc confirms the following:

	Monitoring period	Emission Reductions , tCO2
For 5336-0001 (CPA 1)	21 st March 2012 to 20 th March 2013	17208
For 5336-0002 (CPA 2)	31 st January 2013 to 20 th March 2013	1129
Total Emission Reductions		18337



VERIFICATION REPORT - VVSv7.0

Signed on Behalf of the Designated Operational Entity by Authorized Signatory

Bilal Anwar
Global Program Manager
30/07/2014



VERIFICATION REPORT – VVSv7.0

5. REFERENCES

Category A documents (documents from the CME/PP/CPA Implementer)

1.	Monitoring report for the period (21 March 2012 to 20 March 2013) dated 29/07/2014 version 1.12 and previous versions prepared by M/s Co2balance UK.
2.	Emission reduction spread sheet v07.1 dated 29/07/2014 and previous versions prepared by M/s Co2balance UK
3.	<ul style="list-style-type: none"> Survey records of Water Boiling Test of CPA1 for 21 Domestic ICS from 21 March 2012 to 20 March 2013 Survey records of Water Boiling Test of CPA2 for 22 Domestic ICS from 31 January 2013 to 20 March 2013
4.	<ul style="list-style-type: none"> Uses Survey records of stoves of CPA1 for 21 Domestic ICS from 21 March 2012 to 20 March 2013 Uses Survey records of stoves of CPA2 for 22 Domestic ICS from 31 January 2013 to 20 March 2013
5.	<ul style="list-style-type: none"> MIS Screenshots for date of installation and owner name of the sampled Domestic ICS for CPA1 MIS Screenshots for date of installation and owner name of the sampled Domestic ICS for CPA2
6.	Pre-calibrated certificates: <ul style="list-style-type: none"> 40 Kg digital portable hanging luggage fishing scale, Comark KM14 Digital Submersible digital thermometer.
7.	<ul style="list-style-type: none"> Non Renewable Biomass (NRB) Assessment Report based on Food and Agriculture Organization of the United Nations data http://www.fao.org/forestry/fra/fra2010/en/
8.	Water Boiling Test Version 3 dated January 2007
9.	Water Boiling Test Version 4.1.2 dated October 2009
10.	Water Boiling test records for CPA1 & CPA2
11.	<ul style="list-style-type: none"> Usage Survey records of stoves of CPA1 for 142 Households. Usage Survey records of stoves of CPA2 for 122 Households.
12.	<ul style="list-style-type: none"> 2012 04 02 Pre sampling surveys US CPA 1 2012 04 02 Pre sampling surveys US CPA 2 2012 04 02 Pre sampling surveys WBT CPA 1 2012 04 02 Pre sampling surveys WBT CPA 2

Category B documents (other documents referenced)

13	<i>Efficient Cook Stove Programme: Kenya</i> (UNFCCC Ref No:5336.), PoA-DD Version 6.3 13 March 2013, revised PoA-DD (ver7.8) dated 24/06/2014.
14	<ul style="list-style-type: none"> Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd" (UNFCCC Ref No 5336-0001), registered CPA-DD v1.7 dated 13 March 2012, revised CPA-DD-1 (ver 2.9) dated 24/06/2014. Efficient Cook Stove Programme: Kenya CPA No. 2 Mathira East District co2balance UK Ltd" (UNFCCC Ref No 5336-0002), registered CPA-DD v4.3 dated 11 January 2013, revised CPA-DD-2 (ver5.9) dated 24/06/2014.
15	AMS-II.G. - Energy efficiency measures in thermal applications of non-renewable biomass, version 3
16	Guidelines for completing the programme design document form for small-scale CDM programmes of activities
17	Attachment to Monitoring report form: Instructions for filling out the monitoring report form, version 04.0



VERIFICATION REPORT – VVSv7.0

18	<p>1. Standard: Sampling and surveys for CDM project activities and programme of activities version 04.1</p> <p>2. Guideline: Sampling and surveys for CDM project activities and programme of activities”, version 03.0</p>
19	<p>fNRB calculations based on the data from FAO Forest Resource Assessment 2010, Kenya (http://www.fao.org/docrep/004/Y1997E/y1997e21.htm#bm73).</p> <p>fNRB data from DNA of Kenya http://cdm.unfccc.int/DNA/fNRB/index.html http://cdm.unfccc.int/DNA/fNRB/docs/kenya.pdf</p>



VERIFICATION REPORT – VVSv7.0

VERIFICATION FINDINGS OVERVIEW

Verification findings through desk review, physical site inspection and document review of two CPAs "Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd" and "Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd" under PoA "Efficient Cook Stove Programme: Kenya" are described below:

Explanation of Table 2:

Draft report clarification requests, corrective action requests and forward action request			Summary of PP's response	Verification Team Assessment
CAR/CL No	Description of CAR/CL	Reference		
CL#1/CAR#1/ FAR#1	Assessment No: 01 Date: DD Month YYYY			
	Findings may be Corrective Action Requests (CARs), Clarification Requests (CLs), and Forward Action Request (FARs).	Reference to Table 1 / registered PDD / MR/ any other reference	PP shall provide their response in this column only.	Based on the response Verification team shall provides their assessment here.
	Assessment No: 02 Date: DD Month YYYY			
	Any Open issues after the assessment of response to be reproduced by the Verification team under the next assessment	Reference		
CL#02/CAR#02 FAR#2				
.				
.				
.				
CL#10/CAR#10				

Please Note: This is an open list and more findings may be added as verification progresses.

Responses to each Finding and relevant associated documentation should be recorded in this form by the PP and send back to the Verification team in one submission to PJRCES.

Rows for each assessment and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Verification Team.

FINDINGS OF BOTH CPAs: OVERVIEW SUMMARY

	CARs	CLs	FARs
Total Number raised for CPA1	07	08	00
Total Number raised for CPA2	07	07	



VERIFICATION CHECKLIST – VVSv7.0

APPENDIX A – VERIFICATION CHECKLIST

TABLE: 1 – VERIFICATION REQUIREMENTS CHECKLIST IN-LINE WITH VVS, v3.0¹

CPA NO.1: Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
1. General Verification Approach					
i. Contractual agreement with PJRCES Has PP signed a contractual agreement with PJRCES? If yes, Please mention the date of signing of contract.	PS§203; 62 of 3/ CMP.1	→ Yes, PJRCES entered into a contractual Agreement with CO2balance UK Limited on 26 February 2013.	→ F-06.46 Contract Agreement dated 26 February 2013 signed by PJRCES Inc. and Co2balance UK Limited.	OK	Ok
ii. Registered PoA a) Date and version number of PoA registered and any subsequent versions.	VVS 292	→ PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC dated 21 st March 2012. Subsequently CPA No.01 and 02 was included to PoA on 21 st March 2012 and 31 st January 2013	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok

¹ The Protocol Section (Requirements checklist) was prepared based on the Desk review and Site visit following the requirements of VVS ver03. However during the course of time, VVS version has been changed to version 07. Hence PP has revised the Monitoring report following the provisions (version 07) of CDM Project Standard (PS), Project Cycle Procedure (PCP). PJRCES covers the additional requirements of version 07 of Validation and Verification Standard (VVS) under the sections: “Table 2:Resolution of Issues identified in Table 1 of the Verification checklist” and “Reporting section of this Verification Report”. Thus this final Verification report is in line with the latest requirements of the VVS version 07.



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		respectively. No revision in PoA and CPA documents has been found.			
iii. Coordinating/managing entity Post registration of programme of activities (PoA), is there any change (addition or removal) of coordinating/managing entity? If yes, please confirm below points:	VVS 290	→ PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC on dated 21 March 2012. Subsequently CPA No.01 and 02 was included to the PoA on 21 st March 2012 and 31 st January 2013 respectively. No revision in PoA coordinating/managing entity has been found.	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
a. Has the new letter(s) of authorization from each respective host Party submitted and reviewed by DOE.	VVS 290 (a)	→ NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view		Ok
b. Does the new coordinating /managing entity confirms on developing the same set framework as originally described in the CDM-PoA-DD?	VVS 290(b)	→ NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view		Ok
c. Does the new coordinating /managing entity is in compliance with all the relevant rules and regulation of PoA.	VVS 290(c)	→ NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view		Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
iv. Monitoring/Verification period and Number of CPAs a) Indicate the monitoring period considered for current verification. b) Indicate the number of CPAs covered for the monitoring period defined above. Also, mention the name, unique reference number of the CPAs considered and version number of PoA against which this CPA was included.	VVS 208, 292 (a) (b); Decision 3/CMP. 1 - 62 & 27(h)	a) PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC on dated 21 March 2012. Subsequently CPA No.01 was included to the PoA on 21 st March 2012. So PP has chosen the monitoring period from 21 March 2012 to 20 March 2013 in which both days included. b) PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC on 21 st March 2012 with PoA DD version 6.3 dated 13 March 2012. Subsequently CPA No.01 and 02 was included to the PoA on 21 st March 2012 and 31 st January 2013 respectively. So PP has chosen the monitoring period from 21 March 2012 to 20 March 2013 (both days included). Under this monitoring period 2 CPAs has been considered CPA No:1 (Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd, UNFCC Ref No: 5336-0001) and CPA No.2 (Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd,	➡ MR version 1.2 dated 8 April 2013 ➡ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7/MQ6ZJ2IE5XA4KL3SF1YP9U/view	CL#4	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
<p>c) Also, indicate the verification period for each CPA's considered under the above defined monitoring period.</p> <p>d) Has the monitoring report being made publically available by PJRCES?</p>		<p>UNFCCC Ref No:5336-0002).</p> <p>c) For CPA No:1 (Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd, UNFCC Ref No: 5336-0001) monitoring period chosen from 21 March 2012 to 20 March 2013.CPA No.2 (Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd, UNFCCC Ref No:5336-0002) has been added into the PoA on 31st January 2013 and crediting period starts from 1st March 2013.</p> <p>CL#4: Please make correction in emission reduction estimation in MR and emission reduction sheet for CPA02 as it's crediting period start from 1st March 2013.</p> <p>d) Yes, the monitoring report, v01.2 has been made publicly available at UNFCCC CDM website on 09th April 2013. Same has been verified from the e-mail received from UNFCCC Secretariat dated 9 April 2013.</p>	<p>➡ https://cdm.unfccc.int/PoA_Issuance/month_db/poamonth_n482920306/edit?viewmode=1</p> <p>➡ E-mail communication from UNFCCC Secretariat dated 09 April 2013.</p>		
<p>v. Confirmation to carry our verification activity Has PJRCES performed the following functions for the current PoA under verification</p> <p>- Validation of the PoA,</p>	VVS 292 (footnote 43)	<p>→ No, PJRCES did not perform the validation of the PoA</p>	<p>https://cdm.unfccc.int/ProgrammeOfActivities/poadb/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view</p>	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
<ul style="list-style-type: none"> - Inclusion of CPAs, - Renewal of the PoA - Renewal of crediting period of CPAs <p>If yes, please confirm point (a) below.</p> <p>a) Has PJRCES obtained prior approval for CDM EB to carry our verification of the PoA/CPA under consideration?</p>		<p>→ No, PJRCES did not perform the validation/inclusion of the CPA</p> <p>→ No, PJRCES did not perform the renewal of the PoA</p> <p>→ No, PJRCES did not perform the renewal of crediting period of the CPA</p>			
<p>vi. Gap between previous and current request for issuance</p> <p>a) Date of previous request for issuance.</p> <p>b) Is the current request for issuance within 90 days of the previous request for issuance of PoA?</p> <p>c) Is/Are the CPA/CPAs under verification, excluded either from PoA under verification or any other PoA?</p>	VVS 295	<p>a) PJRCES has found that this is the 1st verification of PoA/CPA and no previous verification/issuance has been done.</p> <p>b) PJRCES has found that this is the 1st verification of PoA/CPA and no previous verification/issuance has been done</p> <p>c) PJRCES has reviewed the registered PoA/CPA documents and does not found CPA/CPAs under verification, excluded either from PoA under verification or any other PoA</p>	<p>https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M_Q6ZJ2IE5XA4KL3SF1YP9U/view</p>	OK	Ok
2. Project Details					
i. Is the Monitoring report as per the latest	VVS	→ The recent Monitoring report form	https://cdm.unfccc	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
standardised format (F-CDM-MR)?	212	available at UNFCCC CDM interface is F-CDM-MR, v03.1. → MR, v01.2, which has been webhosted at UNFCCC CDM website, has been prepared by PP following the recent available MR template (Monitoring report form F-CDM-MR, v03.1) available at UNFCCC CDM interface.	c.int/PoAIssuance/mon_db/poamonn482920306/edit?viewmode=1 MR version 1.2 dated 8 April 2013		
ii. Is the monitoring report filled as per the “Form and Guidelines for completing the monitoring report form”.	VVS 212 (a)	→ PJRCES has reviewed the initial version 1 of MR during completeness check before webhosting of the MR. Some error was found during completeness check and it was corrected as MR Version 1.2 dated 8 April 2013. So webhosted MR was filled as per the “Form and Guidelines for completing the monitoring report form”.	https://cdm.unfccc.int/Reference/GuidClarif/iss/iss_guid07.pdf MR version 1.2 dated 8 April 2013	OK	Ok
iii. Does the MR provide general information of the CPA/CPAs in line with the CPA-DD/DDs included by CDM-EB or by a DOE?	VVS 292	→ PJRCES has reviewed the MR version 1.2 dated 8th April 2013 and found that Section D of the MR does not clearly mention the detailed formulae about sample estimation. CAR#1: MR version 1.2 dated 8 April 2013 section D does not has details formulae about how sample size has been estimated. Please justify → Other sections of the MR sufficiently provide all the information on the CPA/CPAs and its compliance as per	➤ MR v01.2 dated 8 April 2013; ➤ Registered CPA DD, v1.7 dated 13 March 2013; ➤ Validation Report v06 dated 17 August 2011; ➤ ER Spreadsheet;	CAR#1	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		the CPA-DD/DDs already included by CDM-EB or by a DOE. The title of CPA/CPAs, UNFCCC registration number/(s), version of monitoring report, monitoring period, project participants, sectoral scope and the amount of GHG emission reductions requested has been checked and found OK.	➡ Site visit dated 29 April 2013 – 7 May 2013 ➡ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7/MQ6ZJ2IE5X/A4KL3SF1Y/P9U/view		
iv. Are there any open issues identified during the validation/previous verification including FARs.	VVS 213	PJRCES has found that this is the 1 st verification of PoA/CPA and no previous verification has been done. It was also not found any FAR open during validation of PoA and inclusion of CPA01 and CPA02.	➡ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7/MQ6ZJ2IE5X/A4KL3SF1Y/P9U/view	OK	Ok
3. Compliance of the project implementation with the included CPA					
i. Has the implementation and operation of the CPA been conducted in accordance with the description contained in the included CPA-DD and registered PoA-DD?	VVS 225 (a) 226 (a)	→ MR, v01.2 along with the registered CPA-DD has been reviewed. <u>Number of stoves in operation during the verification period</u> → PP has estimated the 16048 stoves			



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>would be distributed to HHs during the inclusion of CPA01 with CPA-DD version 1.7 dated 13 March 2012. But during current monitoring period from 21 March 2012 to 20 March 2013, PP is claiming the stoves of 15628 are in operation. This was confirmed by the user survey of 142 HHs. This as per “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 and it is chosen as per 95% confidence interval and a 5% margin of error requirement. It is also inline with applied methodology. It is found to be OK.</p> <p>CAR#1: PJRCES has visited the project site between 2nd May 2013 to 4th May 2013 and cross checked the HHs survey for recheck the operation of stoves. It has been found that all the HHs was using the improved stoves for their cooking and heating water purposes. But it was also found that HHs was also using the three stone stoves parallelly for the cooking and heating water needs. PJRCES has reviewed the Section B.5 of the CPA-DD and found that PP has fixed a wood consumption 3.98 tonnes per annum per household by the old three stone stoves. Please justify how saving has been estimated in this case if both improved and old stoves are in use.</p>	<ul style="list-style-type: none"> ➤ MR version 1.2 dated 8 April 2013 ➤ CPA-DD version 1.7 dated 13 August 2012 ➤ WBT test records ➤ AMS IIG version 03 ➤ “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 	<p>CAR#2 CAR#3 CAR#4 CL#1</p>	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>CAR#2: PP needs to clarify that as how the surveys of 142 HHs are inline with “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 and AMS IIG version 03.</p> <p>Efficiency of Improved stove: PP has monitored the η_{new} parameter through performing a WBT on a randomly selected sample of appliances from HHs. PP has performed 21 Water Boiling Test.</p> <p>CAR#3: Justify that all WBT performed during sampling are conducted by a well-trained staff, with prior experience conducting WBTs and recording the results. Please provide the evidence that that all the staff which has performed WBT test are sufficiently trained.</p> <p>PJRCEs has reviewed the WBT test records and cross check during site visit that WBTs has been performed in the field and the results recorded. All the recorded data copy has been reviewed the PJRCES and found OK.</p> <p>Fraction of Non-renewable biomass CAR#4 As per applied methodology AMS</p>			



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>IIG version 03 paragraph 11 and registered CPA DD, PP needs to provide the third party independent report in support of f_{NRB} value 0.92 considered during current monitoring period 21 March 2012 to 20 March 2013.</p> <p><u>Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity</u> ($B_{ybaseline_tech}$)</p> <p>CL#1: PP needs to clarify that how this parameter has been monitored and taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance.</p>			
ii. Is the CPA location and all physical features indicated same as that in the included CPA-DD. Confirm geographical coordinates.	VVS 225 226	→ PJRCES has visited the project activity location in Kenya during 2 nd May 2013 to 4 th May 2013 and cross checked the project location. PJRCES confirms that the CPA location and all physical features indicated same as that in the included CPA-DD. It is also confirmed that the geographical coordinates are correctly mentioned and as per the actual scenario. PJRCES team has found during site visit that each stoves has been marked with stoves ID which will remove the possibility of double counting.	<p>☞ Site visit from 2nd May 2013 to 4th May 2013</p> <p>☞ Attendance sheet dated 4th May 2013</p>	OK	Ok
iii. Is the project boundary described in the MR	VVS	→ PJRCES confirm that the project			Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
same as defined in the included CPA-DD and relevant version of the PoA-DD? Please confirm each component based on the applied methodology.	225 226, 291	boundary is line with the project boundary described in the included CPA-DD and applied methodology AMS IIG version 03 paragraph 03. CL#5: PJRCES has found in registered CPA – DD section B.2 that “ <i>The geographical boundary of each CPA will be within the geographic boundaries of the Republic of Uganda, consistent with that set in the PoA</i> ”. Please clarify	<ul style="list-style-type: none"> ➤ MR version 1.2 dated 8 April 2013 ➤ CPA-DD version 1.7 dated 13 August 2012 ➤ AMS IIG version 03 	CL#5	
iv. Is deviation or the proposed or actual changes in the implementation or operation of project activity, if any, comply with the requirement of Project Standard?	VVS 226	→ No deviation or the proposed or actual changes in the implementation or operation of project activity,	<ul style="list-style-type: none"> ➤ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7/MQ6ZJ2IE5XA4KL3SF1YP9U/view ➤ MR version 1.2 ➤ CPA-DD version 1.7 	OK	Ok
v. Has on-site visit conducted? If not, justify the rationale of the decision.	VVS 227	<ul style="list-style-type: none"> → PJRCES has performed the project site visit during 2nd May 2013 to 4th May 2013. → Verification team also confirms that the unique geographical location are correct 	<ul style="list-style-type: none"> ➤ “Guidelines for sampling and surveys for CDM project 		Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>and cross checked during site visit and as per the description provided in the registered CPA-DD.</p> <p>→ PJRCES has seen the improved cook stoves which were correctly numbered with CZKXXXXX like numbers.</p> <p>→ PJRCES has visited the 52 HHs during visit and cross checked the operation of stoves, Type of fuel used etc. it was inline with “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2.</p>	<p><i>activities and programme of activities</i>” version 1.2</p> <p>➡ Site visit attendance sheet</p> <p>➡ AMS IIG version 03</p>	Ok	
vi. Is there any increase in the estimates of the emission reductions in the current monitoring period as compared to that stated in the registered CPA-DD?	228(c)	<p>→ Section E.5 and E.6 of MR, v01.1 have been reviewed. Number of days under the current monitoring period is 365 days.</p> <p>→ Verification team reviewed the registered CPA-DD and was able to confirm that the <i>ex-ante</i> estimation of emission reductions is 50,761 tCO₂e per year.</p> <p>→ Against the estimated emission reductions, PP achieved emission reductions to the tune of 29,619 tCO₂e , which is less than the <i>ex-ante</i> estimated emission reductions.</p>	<p>➡ MR version 1.2</p> <p>➡ CPA-DD version 1.7</p>	OK	Ok
vii. In case the estimated emission reduction in the current monitoring period is more than that estimated in the registered CPA-DD, please clarify the reason behind such	228(c)	<p>→ As confirmed above, there is no increase in the estimates of emission reductions in the current monitoring period as compared to that stated in the</p>	<p>➡ MR version 1.2</p>	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
difference.		registered CPA-DD. → PP clarified in section E.6 of MR, v01.2 that the reason for such difference in the emission reductions is less installation of stoves, reduction in stoves efficiencies and f_{NRB} which resulted in low emission reductions and less usage, as compared to <i>ex-ante</i> estimated emission reductions.	☞ CPA-DD version 1.7		
4. Compliance of the monitoring plan with the monitoring methodology including applicable tool(s)					
i. Monitoring plan considered for verification					
a) Is there any post-registration revision in the PoA-DD or CPA-DD monitoring plan? b) Was the revised monitoring plan approved?	PCP 130	a) No revision in the PoA-DD or CPA-DD monitoring plan. b) NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M_Q6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
c) Is the monitoring plan of the CPA in accordance with the applied methodology?	VVS 229	→ PJRCES has reviewed the registered CPA-DD and found that AMSIIG version 03 has been applied and monitoring plan of the CPA in accordance with the applied methodology.	☞ MR version 1.2 ☞ CPA-DD version 1.7	OK	Ok
d) Is the monitoring plan of the CPA in accordance with the applicable tools?	VVS 229	→ PJRCES has reviewed the registered CPA-DD and found that AMSIIG version 03 has been applied and monitoring	☞ MR version 1.2 ☞ CPA-DD	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		plan of the CPA in accordance with the applied methodology. No other tools has been used	version 1.7		
e) During the CPA validation, were there any additional monitoring parameters identified, that have not been specified in the applied methodology (specifically in case of SSC project activities)	231	→ No additional monitoring parameters identified, that have not been specified in the applied methodology.	<ul style="list-style-type: none"> MR version 1.2 CPA-DD version 1.7 	OK	Ok
5. Compliance of monitoring activities with the monitoring plan defined in included CPA-DD					
i. Have the monitoring of parameters related to the GHG emissions reductions in the project activity been implemented in accordance with the monitoring plan contained in the included CPA-DD or any revised monitoring plan?	Decision 3/ CMP.1-56 VVS 233	→ Section D.2 of MR along with section B.6.1 of the included CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD: <ul style="list-style-type: none"> ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage [η_{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [$f_{NRB,y}$] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [$B_{ybaseline_tech}$] → When compared with the MR, v01.1; verification team identified that the	<ul style="list-style-type: none"> MR version 1.2 CPA-DD version 1.7 AMS IIG version 03 	CAR#5	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>monitoring of parameters is not in-line with the registered CPA-DD section B.6.1.</p> <p>→ CAR#5: PP needs to clarify that how this parameter has been monitored and taken into account if there are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter $B_{\text{baseline_tech}}$, as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.</p>			
ii. Has the monitoring plan been properly implemented and followed by the project participants?	VVS 234 (a)	<p>→ PJRCES has verified the monitoring plan during site visit and found that PP has implemented the monitoring plan except when compared with the MR, v01.1; verification team identified that the monitoring of parameters is not in-line with the registered CPA-DD section B.6.1.</p> <p>→ CAR#5: PP needs to clarify that how this parameter has been monitored and taken into account that if there are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter $B_{\text{baseline_tech}}$, as observed from the registered CPA-DD is a monitoring parameter whereas</p>	<p>➤ MR version 1.2</p> <p>➤ CPA-DD version 1.7</p> <p>➤ AMS IIG version 03</p> <p>➤ Site Visit Attendance Sheet</p>	CAR#5	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		the same is not evident as monitoring parameter in section D.2 of MR.			
iii. If the methodology provides different options (for example, use of default values or on-site measurements), has the monitoring report specified which option is used?	VVS 234 (a)	<p>→ Section D.1 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be use of default values as per the registered CPA-DD:</p> <ul style="list-style-type: none"> ✓ Fuel wood consumption per appliance in absence of the project activity [$B_{average_use}$] as 3.98 tonnes per year per HH ✓ Efficiency of three-stone fire or conventional system [nold] as 0.10 ✓ Net calorific value of the non-renewable woody biomass that is substituted [$NCV_{biomass}$] as 0.015 TJ/tonne. ✓ Emission factor: substitution of non-renewable biomass by similar consumers [$EF_{projected_fossilfuel}$] as 81.6 tCO₂/TJ ✓ Leakage Correction Factor [L] as 0.95 	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	OK	Ok
iv. Have all parameters stated in the monitoring plan been monitored and updated as applicable, including:	VVS 234 (b)	→			
a. Project emission parameters?	VVS 234 (b)	No project emission estimation is required as per applied methodology AMS IIG version 03. The applied methodology	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		directly provides formulae for the calculation of emission reductions. The registered CPA-DD does not have any project emission estimation procedure reported.	version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet		
Add data/ parameter		Not Applicable	➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet	OK	Ok
b. Baseline emission parameters?	VVS 234 (b)	As per registered CPA-DD and applied methodology following equation has been used for emission reduction estimation: $ER_y = B_{y,savings} * f_{NRB,y} * NCV_{biomass} * EF_{projected_fossilfuel}$ ✓ ER_y - Emission reductions during the year y in tCO ₂ e ✓ $B_{y,savings}$ -Quantity of woody biomass that is saved in tonnes ✓ $f_{NRB,y}$ -Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable	➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		biomass ✓ NCV_{biomass} :-Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne) ✓ $EF_{\text{projected_fossilfuel}}$:-Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 tCO ₂ /TJ			
Quantity of woody biomass that is saved in tonnes [$B_{y,\text{savings}}$]		As per registered CPA-DD and applied methodology following equation has been used for Quantity of woody biomass that is saved in tonnes: $B_{y,\text{savings}} = B_{\text{old}} \cdot \left(1 - \frac{\eta_{\text{old}}}{\eta_{\text{new}}}\right)$ ✓ B_{old} :-Quantity of Biomass used in the absence of the project activity in tonnes ✓ η_{old} :-Old efficiency of the system being replaced, measured using representative sampling methods or based on the referenced literature values (fraction) (remains fixed throughout the crediting period). PP has considered as 0.1 as default value from AMSIIG version 3 ✓ η_{new} :- Efficiency of the system being deployed as part of the project activity (fraction) per vintage. It has been monitored using the Water Boiling Test (WBT). The measurement method will be	➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet	GL#2 CAR#3	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>performed on a representative sample of stoves as per AMS-II.G/Version 03 and the “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2.</p> <p>PP has monitored the η_{new} parameter through performing a WBT on a randomly selected sample of appliances from HHs. PP has performed the 21 Water Boiling Test.</p> <p>CL#2: PP to clarify that how 21 WBTs tests has been done. Clearly define the formula under which it has been arrived following AMS-II.G/Version 03 and the “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2</p>			
Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass [$f_{NRB,y}$]		<p>As per registered CPA-DD and applied methodology this parameter needs to monitor through independent third party report.</p> <p>CAR#4 As per applied methodology AMS IIG version 03 paragraph 11 and registered CPA DD, PP needs to provide the third party independent report in support of f_{NRB} value 0.92 considered during current monitoring period 21 March 2012 to 20 March 2013.</p>	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#4	Ok
c. Leakage parameters?	VVS 234 (b)	As per registered CPA-DD and applied methodology leakage related to the non-renewable woody biomass saved by the project activity shall be assessed based on	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 		Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<i>ex post</i> surveys of users and the areas from which this woody biomass is sourced (using 90/30 precision for a selection of samples).	<ul style="list-style-type: none"> AMS IIG version 03 Site Visit Attendance Sheet 		
Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [$B_{baseline_tech}$]		<p>As per applied methodology and registered CPA-DD, leakage has to be considered for:</p> <ul style="list-style-type: none"> ✓ Leakage related to the non-renewable woody biomass saved by the project activity shall be assessed based on <i>ex post</i> surveys of users and the areas from which this woody biomass is sourced (using 90/30 precision for a selection of samples). ✓ If equipment currently being utilised is transferred from outside the boundary to the project activity, leakage is to be considered. <p>PJRCES confirms that no use/diversion of non-renewable woody biomass saved under the project activity by non-project households/users that previously used renewable energy sources.</p> <p>During project site visit, PJRCES team does not found that any of the stoves currently being utilised is transferred from outside the boundary to the project activity. So for this no leakage has been considered.</p>	<ul style="list-style-type: none"> MR version 1.2 CPA-DD version 1.7 AMS IIG version 03 Site Visit Attendance Sheet 	CAR#5	



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		But PJRCES team has found that HHs are using both three stone and improved stove simultaneously. CAR#5: PP needs to clarify that how this parameter has been monitored and taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter B _{ybaseline_tech}], as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.			
v. Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan of the included CPA-DD and registered PoA?	VVS 234 (b)	Section C of MR along with section B.6.1, of registered CPA-DD has been reviewed. Description of Monitoring System: As required by §193 of CDM Project Standard, v02.1; PP clearly provided line diagrams showing all relevant monitoring points. CAR#6 As required by §193 of CDM Project Standard, v02.1; PP clearly provided line diagrams showing all relevant monitoring points. PP has all followed the applied methodology and registered CPA-DD. Some issues has been found on monitoring plan for which issues has been raised above	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#3 CAR#4 CAR#5 CAR#6	Ok
vi. Is the equipment used for monitoring in accordance with section 6 below and is controlled and calibrated in accordance with the monitoring plan, the applied	VVS 234 (c)	→ Verification team found that all the procedure and equipment used for monitoring is as per EB guidelines.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 	CL#6	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
methodology, the Board guidance, local/national standards, or as per the manufacturer's specification?		CL#6 PP is requested to demonstrate the accuracy of the water boiling test done for arriving at the actual efficiency of the project improve stoves.	<ul style="list-style-type: none"> ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 		
vii. Is all the data and results collected and archived according to the tables in the applied methodology and is this included in the Monitoring plan?	VVS 234 (d)	<ul style="list-style-type: none"> → Verification team found that all datas results collected and archive are as per EB guidelines and applied methodology. → Following parameters are to be monitored as per the registered CPA-DD: <ul style="list-style-type: none"> ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage [η_{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [$f_{NRB,y}$] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [$B_{ybaseline_tech}$] → All the above parameters are inline with registered MP of CPA. 	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#3 CAR#4 CAR#5 CAR#6	Ok
viii. Have quality assurance and quality control procedures been applied in accordance with the monitoring plan or the revised monitoring plan?	VVS 234 (e)	<ul style="list-style-type: none"> → Following parameters are to be monitored as per the registered CPA-DD: <ul style="list-style-type: none"> ✓ Number of stoves in operation 	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 	CAR#3 CAR#4 CAR#5 CAR#6	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>during the verification period[Ny,i]</p> <p>It has been monitored as per survey of HHs AMS-II.G/Version 03 and the “<i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i>” version 1.2.</p> <p>✓ Efficiency of each stove by vintage $[\eta_{\text{new}}]$</p> <p>It has been monitored as per WBT test of random sample of HHs AMS-II.G/Version 03 and the “<i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i>” version 1.2.</p> <p>✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage $[f_{\text{NRB},y}]$</p> <p>It has been monitored by independent third party report for the current monitoring period. we have requested PP to provided the copy of report.</p> <p>✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity $[B_{y\text{baseline_tech}}]$</p> <p>CAR#5:PP has been requested to provide the monitoring data for this parameter and</p>	<p>➡ AMS IIG version 03</p> <p>➡ Site Visit Attendance Sheet</p>		



VERIFICATION CHECKLIST - VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		show how it has been used in emission reduction estimation since we have found during site visit that both three stone and improve stoves has been used.			
ix. Has the procedures for emergency and abnormal situations been described?	VVS 234 (e)	After review of CPA-DD and MR version 1.2 we did not found any procedures for emergency and abnormal situations been described CL#3: please clarify as why no procedures for emergency and abnormal situations been described.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CL#3	Ok
x. Has the system for qualification and training been established as relevant for the monitoring and management activities?	VVS 234 (e)	After review of CPA-DD section B.6.1, we did not found that PP has defined the training procedure for staff. CAR#7: please provide the training records for the project monitoring staff.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#7	Ok
6. Compliance with calibration frequency requirements for measuring instruments					
i. Is the calibration of those measuring equipments that have an impact on the claimed emission reductions conducted by the project participants at a frequency	VVS 237	→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-	<ul style="list-style-type: none"> ➤ MR version 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
specified in the applied monitoring methodology and/or the monitoring plan?		DD: ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage [η _{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [f _{NRB,y}] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B _{ybaseline_tech}] → PJRCES verification team found that during monitoring of above parameters no such equipment has found which needs to be calibrated. So it is found that it does not make any impact on the claimed emission reductions conducted by the project participants. It is inline with registered CPA-DD and applied methodology monitoring plan.	1.2 ➔ CPA-DD version 1.7 ➔ AMS IIG version 03 ➔ Emission reduction estimation sheet		
ii. During verification of a certain monitoring period, has the calibration been delayed and has the calibration has been implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available)?	VVS 238	→ As discussed above no such equipment has found which needs to be calibrated. So this is not applicable.	➔ MR version 1.2 ➔ CPA-DD version 1.7 ➔ AMS IIG version 03 ➔ Emission reduction	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			estimation sheet		
iii. If yes, is the following conservative approach adopted in the calculation of emission reductions?	VVS 238	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
a. Applying the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is within permissible limit of error; or	VVS 238 (a)	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
b. Applying the error identified in the delayed calibration test, if the error is beyond the maximum permissible error of the measuring equipment.	VVS 238 (b)	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			estimation sheet		
iv. In cases where the results of the delayed calibration are not available, or the calibration has not been conducted at the time of verification, prior to finalizing verification, were the project participants requested to conduct the required calibration have the project participants calculated the emission reductions conservatively using the approach mentioned in item iii above?	VVS 240	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
v. Is it possible for the project participants to conduct the calibration at a frequency specified by either the applied methodology, guidance provided by the Board, and/or the registered monitoring plan?	VVS 241	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
vi. If no, were the requirements for post registration changes, in section of 9.5 of the VVS, followed?	VVS 241	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			estimation sheet		
7. Assessment of data and calculation of emission reductions					
i. Is a complete set of data for the specified monitoring period is available?	VVS 245	<p>→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD:</p> <ul style="list-style-type: none"> ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage [η_{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [$f_{\text{NRB},y}$] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [$B_{\text{baseline tech}}$] 	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	CAR#3 CAR#4 CAR#5 CAR#6	Ok
ii. Has information provided in the monitoring report been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis?	VVS 245	<p>→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD. PJRCS has cross checked the following parameters:</p> <p><u>Number of stoves in operation during the verification period[Ny,i]</u></p>	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation 	CAR#1 CAR#2 CAR#3 CAR#4 CAR#5 CAR#6 CAR#7 CL#1 CL#2	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of stoves under operation to cross check the operation of stoves. It has been found that all the HHs are using CZK stoves and also using the three stone stoves simultaneously.</p> <p>Efficiency of each stove by vintage [η_{new}]</p> <p>PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of stoves under operation. It has been found that all the WBT tests have been performed in HHs VZK stoves. PJRCES was able to verify the WBT hard and soft copy records.</p> <p>Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [$f_{\text{NRB},y}$]</p> <p>As per applied methodology and registered CPA-DD, this parameter needs to be monitored yearly by the independent third party. A copy of report has been requested. PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of HHs and collected the information that how wood has been used in stoves. Either by collection from nearby forest or bought</p>	sheet	CL#3	



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>from the market.</p> <p>Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B_{ybaseline_tech}]</p> <p>PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of stoves under operation. It has been found that all the HHs are using CZK stoves and also using the three stone stoves simultaneously. We have raised an issue and clarified with PP on this.</p>			
iii. Has on-site fossil fuel consumption, if any, been monitored? Is any emission source missed? Check the site lay-out and confirm through the site visit.	VVS 245	→ PJRCES verified the CZK fuel used and does not found any fossil fuel used in that. It has also found that as per registered CPA-DD and applied methodology no separate project emission estimation procedure has been given.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
iv. Have calculations of baseline emissions, and project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology? Please check if there is a change in emission reductions during the	VVS 245	→ PP has applied AMS IIG version 03 in registered CPA-DD and it has been found that baseline emission and leakage emission estimation has been done as per formulae given in methodology and registered CPA-DD.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
monitoring period from the estimated emission reductions calculated in the included CPA.		→ Section E.5 and E.6 of MR, v01.1 have been reviewed. Number of days under the current monitoring period is 365 days. → Verification team reviewed the registered CPA-DD and was able to confirm that the <i>ex-ante</i> estimation of emission reductions is 50,761 tCO ₂ e per year. → Against the estimated emission reductions, PP achieved emission reductions to the tune of 29,619 tCO ₂ e, which is less than the <i>ex-ante</i> estimated emission reductions.	reduction estimation sheet		
v. Have any assumptions used in emission calculations been justified?	VVS 245	→ PP has applied AMS IIG version 03 in registered CPA-DD and it has been found that all the assumption taken into baseline emission and leakage emission estimation has been considered correctly as given in methodology and registered CPA-DD.	➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet	OK	Ok
vi. Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	VVS 245	→ PP has applied AMS IIG version 03 in registered CPA-DD and it has been found that all the emission factors, IPCC default values and other reference values taken into baseline emission and	➤ MR version 1.2 ➤ CPA-DD version 1.7 ➤ AMS IIG	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		leakage emission estimation has been considered correctly as given in methodology and registered CPA-DD.	version 03 ➡ Emission reduction estimation sheet		
8. Post-Registration Changes					
8.1. Temporary deviations from the registered monitoring plan or applied methodology, Permanent changes from the registered monitoring plan or applied methodology, changes to the project design of a registered project activity					
i. Confirm the following:					
ii. Is there any change regarding the modalities or information in the MoC statement or its Annexes after a request for registration has been submitted?	PS§207	→ PJRCES has verified the all the registered PoA and CPA No01 documents and does not found any change regarding the modalities or information in the MoC statement or its Annexes after a request for registration has been submitted .	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iii. Has PP revised the MoC statement in accordance with the Project Cycle procedure?	PS§207	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iv. Confirm whether the DOE contracted by PP to validate post-registration changes, accredited to the validation function for the specific CDM sectoral scope	247 PS§208	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST		REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
		VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
				Q6ZJ2IE5XA4KL3SF1YP9U/view		
v.	If project participants are temporarily unable to monitor the included CPA or the registered PoA in accordance with the registered monitoring plan or the applied methodology, confirm following:	PS§209	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
vi.	Has PP described the nature, extent and duration of the non-conforming monitoring?	PS§209	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
vii.	Cases where PP has not monitored or is unable to produce the evidence related to baseline emissions parameter(s) – determine whether prior approval from Board is required?	PS Appendix x 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
viii.	Cases where PP has not monitored or is unable to produce the evidence related to project emissions parameter(s) – determine whether prior approval from Board is required?	PS Appendix x 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
ix.	Has PP proposed alternative monitoring of the project activity in the monitoring report?	PS§209	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
x. Please confirm If the change from the registered monitoring plan or applied methodology is permanent.	PS Appendix 1	→ Not Applicable	Q6ZJ2IE5XA4KL 3SF1YP9U/view https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
xi. Please confirm if the proposed or actual changes to the project design of a included CPA or registered PoA adversely impact any of the following: <ul style="list-style-type: none"> - The applicability and application of the applied methodology under which the project activity has been registered. - The additionality of the project activity - The scale of the project activity. 	PS Appendix 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
8.2. Corrections					
i. Is there any corrections made to the project information or the parameters determined at validation by PP and identified during verification?	VVS 258	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
ii. Do such corrections affect the design of the registered project activity?	PS Appendix 1; §1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			Q6ZJ2IE5XA4KL3SF1YP9U/view		
ii. Is the corrected information accurately reflects the actual project information?	VVS 258(a)	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iii. Is the corrected parameter(s) in accordance with the applied methodology?	VVS 258(b)	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
8.3. Change in the Start date of the crediting period					
i. Does PP wish to change the start date of the crediting period in accordance with section 12.8 of CDM Project Standard?	VVS 260	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
ii. Confirm if the change in the start date of crediting period results in the less conservative baseline.	VVS 260	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

CPA No:2 Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
1. General Verification Approach					
i. Contractual agreement with PJRCES Has PP signed a contractual agreement with PJRCES? If yes, Please mention the date of signing of contract.	PS§203; 62 of 3/ CMP.1	→ Yes, PJRCES entered into a contractual Agreement with CO2balance UK Limited on 7 March 2013.	→ F-06.46 Contract Agreement dated 7 March 2013 signed by PJRCES Inc. and Co2balance UK Limited.	OK	Ok
ii. Registered PoA b) Date and version number of PoA registered and any subsequent versions.	VVS 292	→ PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC dated 21 st March 2012. Subsequently CPA No.01 and 02 was included to PoA on 21 March 2012 and 31 January 2013 respectively. No revision in PoA and CPA documents has been found.	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iii. Coordinating/managing entity Post registration of programme of activities (PoA), is there any change (addition or	VVS 290	→ PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC on dated	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
removal) of coordinating/managing entity? If yes, please confirm below points:		21 March 2012. Subsequently CPA No.01 and 02 was registered with UNFCCC dated 21 March 2012 and 31 January 2013 respectively. No revision in PoA coordinating/managing entity has been found.	Q6ZJ2IE5XA4KL3SF1YP9U/view		
a. Has the new letter(s) of authorization from each respective host Party submitted and reviewed by DOE.	VVS 290 (a)	→ NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view		Ok
b. Does the new coordinating /managing entity confirms on developing the same set framework as originally described in the CDM-PoA-DD?	VVS 290(b)	→ NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view		Ok
c. Does the new coordinating /managing entity is in compliance with all the relevant rules and regulation of PoA.	VVS 290(c)	→ NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M/Q6ZJ2IE5XA4KL3SF1YP9U/view		Ok
iv. Monitoring/Verification period and Number of CPAs e) Indicate the monitoring period considered for current verification.	VVS 208, 292 (a) (b); Decision 3/CMP.	a) PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC on dated 21 March 2012 with PoA-DD version 6.3 dated 13 March 2012. Subsequently	➡ MR version 1.2 dated 8 April 2013	CL#4	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
<p>f) Indicate the number of CPAs covered for the monitoring period defined above. Also, mention the name, unique reference number of the CPAs considered and version number of PoA against which this CPA was included.</p> <p>g) Also, indicate the verification period for each CPA's considered under the above defined monitoring period.</p>	1 - 62 & 27(h)	<p>CPA No.01 was registered with UNFCCC dated 21 March 2012. So PP has chosen the monitoring period from 21 March 2012 to 20 March 2013 in which both days included.</p> <p>b) PJRCES has verified from UNFCCC website that PoA (PoA 5336: Efficient Cook Stove Programme: Kenya) has been registered with UNFCCC on dated 21 March 2012. Subsequently CPA No.01 and 02 was registered with UNFCCC dated 21 March 2012 and 31 January 2013 respectively. So PP has chosen the monitoring period from 21 March 2012 to 20 March 2013 in which both days included. Under this monitoring period 2 CPAs has been considered CPA No:1 (Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd, UNFCC Ref No: 5336-0001) and CPA No.2 (Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd, UNFCCC Ref No:5336-0002)</p> <p>c) For CPA No:1 (Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd, UNFCC Ref No: 5336-0001) monitoring period chosen from 21 March</p>	<p>➡ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7/MQ6ZJ2IE5XA4KL3SF1YP9U/view</p> <p>➡ https://cdm.unfccc.int/PoAIssuance/moan_db/poamon482920306/edit?viewmode=1</p> <p>➡ E-mail communication from UNFCCC Secretariat dated 09 April 2013.</p>		



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
h) Has the monitoring report being made publically available by PJRCES?		<p>2012 to 20 March 2013. CPA No.2 (Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd, UNFCCC Ref No:5336-0002) has been added into the PoA on 31st January 2013 and crediting period starts from 1st March 2013.</p> <p>CL#4: Please make correction in emission reduction estimation in MR and emission reduction sheet for CPA02 as it's crediting period start from 1st March 2013.</p> <p>d) Yes, the monitoring report, v01.2 has been made publicly available at UNFCCC CDM website on 09 April 2013. Same has been verified from the e-mail received from UNFCCC Secretariat dated 9 April 2013.</p>			
<p>v. Confirmation to carry our verification activity Has PJRCES performed the following functions for the current PoA under verification</p> <ul style="list-style-type: none"> - Validation of the PoA, - Inclusion of CPAs, - Renewal of the PoA - Renewal of crediting period of CPAs 	VVS 292 (footnote 43)	<p>→ No, PJRCES did not perform the validation of the PoA</p> <p>→ No, PJRCES did not perform the validation/inclusion of the CPA</p> <p>→ No, PJRCES did not perform the renewal of the PoA</p>	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7M_Q6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
<p>If yes, please confirm point (a) below.</p> <p>b) Has PJRCES obtained prior approval for CDM EB to carry our verification of the PoA/CPA under consideration?</p>		<p>→ No, PJRCES did not perform the renewal of crediting period of the CPA</p> <p>→</p>			
<p>vi. Gap between previous and current request for issuance</p> <p>d) Date of previous request for issuance.</p> <p>e) Is the current request for issuance within 90 days of the previous request for issuance of PoA?</p> <p>f) Is/Are the CPA/CPAs under verification, excluded either from PoA under verification or any other PoA?</p>	VVS 295	<p>d) PJRCES has found that this is the 1st verification of PoA/CPA and no previous verification has been done.</p> <p>e) PJRCES has found that this is the 1st verification of PoA/CPA and no previous verification has been done</p> <p>f) PJRCES has reviewed the registered PoA/CPA documents and does not found CPA/CPAs under verification, excluded either from PoA under verification or any other PoA</p>	<p>https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view</p>	OK	Ok
2. Project Details					
<p>i. Is the Monitoring report as per the latest standardised format (F-CDM-MR)?</p>	VVS 212	<p>→ The recent Monitoring report form available at UNFCCC CDM interface is F-CDM-MR, v03.1.</p> <p>→ MR, v01.2, which has been webhosted at UNFCCC CDM website, has been prepared by PP following the recent available MR template (Monitoring</p>	<p>https://cdm.unfccc.int/PoAIssuance/mon_db/poamone482920306/edit?viewmode=1</p> <p>MR version 1.2</p>	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		report form F-CDM-MR, v03.1) available at UNFCCC CDM interface.	dated 8 April 2013		
ii. Is the monitoring report filled as per the “Form and Guidelines for completing the monitoring report form”.	VVS 212 (a)	→ PJRCES has reviewed the initial version 1 of MR during completeness check before webhosting of the MR. Some error was found during completeness check and it was corrected as MR version 1.2 dated 8 April 2013. So webhosted MR was filled as per the “Form and Guidelines for completing the monitoring report form”.	https://cdm.unfccc.int/Reference/Guidclarif/iss/iss_guid07.pdf MR version 1.2 dated 8 April 2013	OK	Ok
iii. Does the MR provide general information of the CPA/CPAs in line with the CPA-DD/DDs included by CDM-EB or by a DOE?	VVS 292	→ PJRCES has reviewed the MR version 1.2 dated 8 April 2013 and found that section D of PP did not clearly added the details formulae about sample estimation CAR#1: MR version 1.2 dated 8 April 2013 section D does not has details formulae about how sample estimation has been estimated. Please justify → Other sections of the MR sufficiently provide all the information on the CPA/CPAs and its compliance as per the CPA-DD/DDs already included by CDM-EB or by a DOE. The title of CPA/CPAs, UNFCCC registration number/(s), version of monitoring report, monitoring period, project participants, sectoral scope and the amount of GHG	<ul style="list-style-type: none"> ➤ MR v01.2 dated 8 April 2013; ➤ Registered CPA DD, v1.7 dated 13 March 2013; ➤ Validation Report v06 dated 17 August 2011; ➤ ER Spreadsheet; ➤ Site visit dated 29 April 2013 – 7 May 2013 ➤ https://cdm.unfccc.int/Prog 	CAR#1	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		emission reductions requested has been checked and found OK.	rammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view		
iv. Are there any open issues identified during the validation/previous verification including FARs.	VVS 213	PJRCS has found that this is the 1 st verification of PoA/CPA and no previous verification has been done. It was also not found any FAR open during validation of PoA and inclusion of CPA01 and CPA02.	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
3. Compliance of the project implementation with the included CPA					
i. Has the implementation and operation of the CPA been conducted in accordance with the description contained in the included CPA-DD and registered PoA-DD?	VVS 225 (a) 226 (a)	<p>→ MR, v01.2 along with the registered CPA-DD has been reviewed.</p> <p><u>Number of stoves in operation during the verification period</u></p> <p>→ PP has estimated the 11907 stoves would be distributed to HHs during registration of CPA02 with CPA-DD version 4.3 dated 11 January 2013. But during current monitoring period from 31 January 2013 to 20 March 2013, PP is claiming the stoves of 4046 are in</p>	<p>MR version 1.2 dated 8 April 2013</p> <p>CPA-DD version 4.3</p>		Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>operation. This was confirm by the user survey of 122 HHs. This as per “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 and it is chosen as per 95% confidence interval and a 5% margin of error requirement.it is also inline with applied methodology. It is found to be OK.</p> <p>CAR#1: PJRCES has visit the project site between 5 May 2013 to 6 May 2013 and cross checked the HHs survey for recheck the operation of stoves. It has been found that all the HHs was using the improved stoves for their cooking and heating water purposes. But it was also found that HHs was also using the three stone stoves parallelly for the cooking and heating water needs. PJRCES has reviewed the registered CPA-DD section 5 and found that PP has fixed a wood consumption 5.14 tonnes per annum per household by the old three stone stoves. Please justify how saving has been estimated in this case if both improved and old stoves are in use.</p> <p>CAR#2: PP needs to clarify that how 122 numbers of HHs survey are inline with “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 and AMS IIG version 03.</p>	<p>dated 11 January 2013</p> <ul style="list-style-type: none"> ➤ WBT test records ➤ AMS IIG version 03 ➤ “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 	<p>CAR#2 CAR#3 CAR#4 CL#1</p>	



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p><u>Efficiency of Improved stove:</u> PP has monitored the η_{new} parameter through performing a WBT on a randomly selected sample of appliances from HHs. PP has performed the 22 Water Boiling Test.</p> <p>CAR#3: Justify that all WBT performed during sampling are conducted by a well-trained staff, with prior experience conducting WBTs and recording the results. Please provide the evidence that all the staff which has performed WBT test are sufficiently trained.</p> <p>PJRCEs has reviewed the WBT test records and cross check during site visit that WBTs has been performed in the field and the results recorded. All the recorded data copy has been reviewed the PJRCES and found OK.</p> <p><u>Fraction of Non-renewable biomass</u> CAR#4 As per applied methodology AMS IIG version 03 paragraph 11 and registered CPA DD, PP needs to provide the third party independent report in support of f_{NRB} value 0.92 considered during current monitoring period 21 March 2012 to 20 March 2013.</p>			



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p><u>Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity</u> (B_{ybaseline_tech})</p> <p>CL#1: PP needs to clarify that how this parameter has been monitored and taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance.</p>			
ii. Is the CPA location and all physical features indicated same as that in the included CPA-DD. Confirm geographical coordinates.	VVS 225 226	→ PJRCES has visit the project activity location in Kenya during 5 May 2013 to 6 May 2013 and cross checked the project location. PJRCES confirms that the CPA location and all physical features indicated same as that in the included CPA-DD. It is also confirmed that the geographical coordinates are correctly mentioned and as per actual scenario. PJRCES team has found during site visit that each stoves has been marked with stoves ID which will remove the possibility of double counting.	<p>☞ Site visit from 5 May 2013 to 6 May 2013</p> <p>☞ Attendance sheet dated 6 May 2013</p>	OK	Ok
iii. Is the project boundary described in the MR same as defined in the included CPA-DD and relevant version of the PoA-DD? Please confirm each component based on the applied methodology.	VVS 225 226, 291	→ PJRCES confirm that the project boundary is line with the project boundary described in the included CPA-DD and applied methodology AMS IIG version 03 paragraph 03.	<p>☞ MR version 1.2 dated 8 April 2013</p> <p>☞ CPA-DD version 4.3 dated 11</p>	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			January 2013 ➤ AMS IIG version 03		
iv. Is deviation or the proposed or actual changes in the implementation or operation of project activity, if any, comply with the requirement of Project Standard?	VVS 226	→ No deviation or the proposed or actual changes in the implementation or operation of project activity,	➤ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7/MQ6ZJ2IE5X/A4KL3SF1Y/P9U/view ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013	OK	Ok
v. Has on-site visit conducted? If not, justify the rationale of the decision.	VVS 227	→ PJRCES has performed the project site visit during 5 May 2013 to 6 May 2013. → Verification team is also confirm that the unique geographical location are correct and cross checked during site visit and as per the description provided in the registered CPA-DD. → PJRCES has seen the improved cook stoves which were correctly numbered with CZKXXXXX like numbers. → PJRCES has visited the 54 HHs during visit and cross checked the operation of	➤ “Guidelines for sampling and surveys for CDM project activities and programme of activities” version 1.2 ➤ Site visit attendance sheet		



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		stoves, Type of fuel used etc. it was inline with “ <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> ” version 1.2.	➡ AMS IIG version 03		
vi. Is there any increase in the estimates of the emission reductions in the current monitoring period as compared to that stated in the registered CPA-DD?	228(c)	→ Section E.5 and E.6 of MR, v01.1 have been reviewed. Number of days under the current monitoring period is 48 days. → Verification team reviewed the registered CPA-DD and was able to confirm that the <i>ex-ante</i> estimation of emission reductions is 48,224 tCO ₂ e per year. → Against the estimated emission reductions, PP achieved emission reductions to the tune of 1,533 tCO ₂ e, which is less than the <i>ex-ante</i> estimated emission reductions.	➡ MR version 1.2 ➡ CPA-DD version 4.3 dated 11 January 2013	OK	Ok
vii. In case the estimated emission reduction in the current monitoring period is more than that estimated in the registered CPA-DD, please clarify the reason behind such difference.	228(c)	→ As confirmed above, there is no increase in the estimates of emission reductions in the current monitoring period as compared to that stated in the registered CPA-DD. → PP clarified in section E.6 of MR, v01.2 that the reason for such difference in the emission reductions is less installation of stoves, reduction in stoves efficiencies and f_{NRB} which resulted in low emission reductions and less uses, as compared to <i>ex-ante</i> estimated emission reductions.	➡ MR version 1.2 ➡ CPA-DD version 4.3 dated 11 January 2013	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
4. Compliance of the monitoring plan with the monitoring methodology including applicable tool(s)					
i. Monitoring plan considered for verification c) Is there any post-registration revision in the PoA-DD or CPA-DD monitoring plan? d) Was the revised monitoring plan approved?	PCP 130	f) No revision in the PoA-DD or CPA-DD monitoring plan. g) NA	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
h) Is the monitoring plan of the CPA in accordance with the applied methodology?	VVS 229	→ PJRCES has reviewed the registered CPA-DD and found that AMSIIG version 03 has been applied and monitoring plan of the CPA in accordance with the applied methodology.	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013	OK	Ok
i) Is the monitoring plan of the CPA in accordance with the applicable tools?	VVS 229	→ PJRCES has reviewed the registered CPA-DD and found that AMSIIG version 03 has been applied and monitoring plan of the CPA in accordance with the applied methodology. No other tools has been used	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013	OK	Ok
j) During the CPA validation, were there any additional monitoring parameters identified, that have not been specified in the applied methodology (specifically in case of SSC project activities)	231	→ No additional monitoring parameters identified, that have not been specified in the applied methodology.	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			January 2013		
5. Compliance of monitoring activities with the monitoring plan defined in included CPA-DD					
i. Have the monitoring of parameters related to the GHG emissions reductions in the project activity been implemented in accordance with the monitoring plan contained in the included CPA-DD or any revised monitoring plan?	Decision 3/ CMP.1- 56 VVS 233	<p>→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD:</p> <ul style="list-style-type: none"> ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage [η_{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [f_{NRB,y}] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B_{ybaseline_tech}] <p>→ When compared with the MR, v01.1; verification team identified that the monitoring of parameters is not in-line with the registered CPA-DD section B.6.1.</p> <p>→ CAR#5: PP needs to clarify that how this parameter has been monitored and taken into account that if they are still</p>	<p>➤ MR version 1.2</p> <p>➤ CPA-DD version 4.3 dated 11 January 2013</p> <p>➤ AMS IIG version 03</p>	CAR#5	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		baseline stoves operating or are replaced by an equivalent in service appliance. The parameter B _{ybaseline_tech}], as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.			
ii. Has the monitoring plan been properly implemented and followed by the project participants?	VVS 234 (a)	<p>→ PJRCES has verified the monitoring plan during site visit and found that PP has implemented the monitoring plan except When compared with the MR, v01.1; verification team identified that the monitoring of parameters is not in-line with the registered CPA-DD section B.6.1.</p> <p>→ CAR#5: PP needs to clarify that how this parameter has been monitored and taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter B_{ybaseline_tech}], as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.</p>	<p>➤ MR version 1.2</p> <p>➤ CPA-DD version 4.3 dated 11 January 2013</p> <p>➤ AMS IIG version 03</p> <p>➤ Site Visit Attendance Sheet</p>	CAR#5	Ok
iii. If the methodology provides different options (for example, use of default values or on-site measurements), has the monitoring report specified which option is used?	VVS 234 (a)	→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be use of default valuesas per the registered CPA-DD:	➤ MR version 1.2	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<ul style="list-style-type: none"> ✓ Fuel wood consumption per appliance in absence of the project activity [$B_{average_use}$] as 5.14 tonnes per year per HH ✓ Efficiency of three-stone fire or conventional system [nold] as 0.10 ✓ Net calorific value of the non-renewable woody biomass that is substituted [$NCV_{biomass}$] as 0.015 TJ/tonne. ✓ Emission factor: substitution of non-renewable biomass by similar consumers [$EF_{projected_fossilfuel}$] as 81.6 tCO₂/TJ ✓ Leakage Correction Factor [L] as 0.95 	<ul style="list-style-type: none"> ➡ CPA-DD version 4.3 dated 11 January 2013 ➡ AMS IIG version 03 ➡ Site Visit Attendance Sheet 		
iv. Have all parameters stated in the monitoring plan been monitored and updated as applicable, including:	VVS 234 (b)	→			
a. Project emission parameters?	VVS 234 (b)	No project emission estimation is required as per applied methodology AMS IIG version 03. The applied methodology directly provides formulae for the calculation of emission reductions. The registered CPA-DD does not have any project emission estimation procedure reported.	<ul style="list-style-type: none"> ➡ MR version 1.2 ➡ CPA-DD version 4.3 dated 11 January 2013 ➡ AMS IIG version 03 ➡ Site Visit Attendance Sheet 	OK	Ok



VERIFICATION CHECKLIST - VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
Add data/ parameter		Not Applicable	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	OK	Ok
b. Baseline emission parameters?	VVS 234 (b)	<p>As per registered CPA-DD and applied methodology following equation has been used for emission reduction estimation:</p> $ER_y = B_{y,savings} * f_{NRB,y} * NCV_{biomass} * EF_{projected_fossilfuel}$ <ul style="list-style-type: none"> ✓ ER_y- Emission reductions during the year y in tCO₂e ✓ $B_{y,savings}$-Quantity of woody biomass that is saved in tonnes ✓ $f_{NRB,y}$-Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass ✓ $NCV_{biomass}$-Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		0.015 TJ/tonne) ✓ EF _{projected_fossilfuel} :-Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 tCO ₂ /TJ			
Quantity of woody biomass that is saved in tonnes [B _{y,saving}]		<p>As per registered CPA-DD and applied methodology following equation has been used for Quantity of woody biomass that is saved in tonnes:</p> $B_{y,savings} = B_{old} \cdot \left(1 - \frac{\eta_{old}}{\eta_{new}}\right)$ <p>✓ B_{old}:-Quantity of Biomass used in the absence of the project activity in tonnes ✓ η_{old} :-Old efficiency of the system being replaced, measured using representative sampling methods or based on the referenced literature values (fraction) (remains fixed throughout the crediting period). PP has considered as 0.1 as default value from AMSIIG version 3 ✓ η_{new}:- Efficiency of the system being deployed as part of the project activity (fraction) per vintage. It has been monitored using the Water Boiling Test (WBT). The measurement method will be performed on a representative sample of stoves as per AMS-II.G/Version 03 and the “Guidelines for sampling and surveys for CDM project activities and</p>	<p>➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet</p>	CL#2 CAR#3	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p><i>programme of activities</i>" version 1.2.</p> <p>PP has monitored the η_{new} parameter through performing a WBT on a randomly selected sample of appliances from HHs. PP has performed the 21 Water Boiling Test.</p> <p>CL#2: PP to clarify that how 21 WBTs tests has been done. Clearly define the formula under which it has been arrived following AMS-II.G/Version 03 and the "<i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i>" version 1.2</p>			
Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass [$f_{NRB,y}$]		<p>As per registered CPA-DD and applied methodology this parameter needs to monitor through independent third party report.</p> <p>CAR#4 As per applied methodology AMS IIG version 03 paragraph 11 and registered CPA DD, PP needs to provide the third party independent report in support of f_{NRB} value 0.92 considered during current monitoring period 21 March 2012 to 20 March 2013.</p>	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#4	Ok
c. Leakage parameters?	VVS 234 (b)	As per registered CPA-DD and applied methodology leakage related to the non-renewable woody biomass saved by the project activity shall be assessed based on <i>ex post</i> surveys of users and the areas from which this woody biomass is sourced (using	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 	Ok	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		90/30 precision for a selection of samples).	<ul style="list-style-type: none"> AMS IIG version 03 Site Visit Attendance Sheet 		
Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [$B_{\text{baseline_tech}}$]		<p>As per applied methodology and registered CPA-DD, leakage has to be considered for:</p> <ul style="list-style-type: none"> ✓ Leakage related to the non-renewable woody biomass saved by the project activity shall be assessed based on <i>ex post</i> surveys of users and the areas from which this woody biomass is sourced (using 90/30 precision for a selection of samples). ✓ If equipment currently being utilised is transferred from outside the boundary to the project activity, leakage is to be considered. <p>PJRCES confirms that no use/diversion of non-renewable woody biomass saved under the project activity by non-project households/users that previously used renewable energy sources.</p> <p>During project site visit, PJRCES team does not found that any of the stoves currently being utilised is transferred from outside the boundary to the project activity. So for this no leakage has been considered.</p>	<ul style="list-style-type: none"> MR version 1.2 CPA-DD version 4.3 dated 11 January 2013 AMS IIG version 03 Site Visit Attendance Sheet 	CAR#5	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		But PJRCES team has found that HHs are using both three stone and improved stove simultaneously. CAR#5: PP needs to clarify that how this parameter has been monitored and taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter B _{ybaseline_tech} , as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.			
v. Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan of the included CPA-DD and registered PoA?	VVS 234 (b)	Section C of MR along with section B.6.1, of registered CPA-DD has been reviewed. Description of Monitoring System: As required by §193 of CDM Project Standard, v02.1; PP clearly provided line diagrams showing all relevant monitoring points. CAR#6 As required by §193 of CDM Project Standard, v02.1; PP clearly provided line diagrams showing all relevant monitoring points. PP has all followed the applied methodology and registered CPA-DD. Some issues has been found on monitoring plan for which issues has been raised above	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#3 CAR#4 CAR#5 CAR#6	Ok
vi. Is the equipment used for monitoring in accordance with section 6 below and is controlled and calibrated in accordance with the monitoring plan, the applied	VVS 234 (c)	→ Verification team found that all the procedure and equipment used for monitoring is as per EB guidelines.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 	CL#5	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
methodology, the Board guidance, local/national standards, or as per the manufacturer's specification?		CL#5 PP is requested to demonstrate the accuracy of the water boiling test done for arriving at the actual efficiency of the project improved stoves.	dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet		
vii. Is all the data and results collected and archived according to the tables in the applied methodology and is this included in the Monitoring plan?	VVS 234 (d)	→ Verification team found that all datas results collected and archive are as per EB guidelines and applied methodology. → Following parameters are to be monitored as per the registered CPA-DD: ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage $[\eta_{new}]$ ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage $[f_{NRB,y}]$ ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity $[B_{ybaseline_tech}]$ → All the above parameters are inline with registered MP of CPA.	➤ MR version 1.2 ➤ C CPA-DD version 4.3 dated 11 January 2013 ➤ PA-DD version 1.7 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet	CAR#3 CAR#4 CAR#5 CAR#6	Ok
viii. Have quality assurance and quality control procedures been applied in accordance with	VVS 234 (e)	→ Following parameters are to be monitored as per the registered CPA-	➤ MR version 1.2	CAR#3 CAR#4	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
the monitoring plan or the revised monitoring plan?		<p>DD:</p> <p>✓ Number of stoves in operation during the verification period[Ny,i]</p> <p>It has been monitored as per survey of HHs AMS-II.G/Version 03 and the “<i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i>” version 1.2.</p> <p>✓ Efficiency of each stove by vintage [η_{new}]</p> <p>It has been monitored as per WBT test of random sample of HHs AMS-II.G/Version 03 and the “<i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i>” version 1.2.</p> <p>✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [f_{NRB,y}]</p> <p>It has been monitored by independent third party report for the current monitoring period. we have requested PP to provided the copy of report.</p> <p>✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B_{ybaseline tech}]</p>	<p>➤ CPA-DD version 4.3 dated 11 January 2013</p> <p>➤ AMS IIG version 03</p> <p>➤ Site Visit Attendance Sheet</p>	CAR#5 CAR#6	



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		We have requested [CAR#5]PP to provide the monitoring data for this parameter and show how it has been used in emission reduction estimation since we have found during site visit that both three stone and improve stoves has been used.			
ix. Has the procedures for emergency and abnormal situations been described?	VVS 234 (e)	After review of CPA-DD and MR version 1.2 we did not find any procedures for emergency and abnormal situations described. CL#3: please clarify that why any procedures for emergency and abnormal situations been described.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CL#3	Ok
x. Has the system for qualification and training been established as relevant for the monitoring and management activities?	VVS 234 (e)	After review of CPA-DD section B.6.1, we did not find PP has define the training procedure for staff. CAR#7: please provide the training records for the project monitoring staff.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Site Visit Attendance Sheet 	CAR#7	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
6. Compliance with calibration frequency requirements for measuring instruments					
i. Is the calibration of those measuring equipments that have an impact on the claimed emission reductions conducted by the project participants at a frequency specified in the applied monitoring methodology and/or the monitoring plan?	VVS 237	<p>→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD:</p> <ul style="list-style-type: none"> ✓ Number of stoves in operation during the verification period[Ny,i] ✓ Efficiency of each stove by vintage [η_{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [f_{NRB,y}] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B_{ybaseline_tech}] <p>→ PJRCES verification team found that during monitoring of above parameters no such equipment has found which needs to be calibrated. So it is found that it does not make any impact on the claimed emission reductions conducted by the project participants. It is inline with registered CPA-DD and applied methodology monitoring plan.</p>	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
ii. During verification of a certain monitoring period, has the calibration been delayed and	VVS 238	<p>→ As discussed above no such equipment has found which needs to be calibrated.</p>	<ul style="list-style-type: none"> ➤ MR version 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
has the calibration has been implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available)?		So this is not applicable.	1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet		
iii. If yes, is the following conservative approach adopted in the calculation of emission reductions?	VVS 238	→ Not Applicable.	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet	OK	Ok
c. Applying the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is within permissible limit of error; or	VVS 238 (a)	→ Not Applicable.	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
			➤ Emission reduction estimation sheet		
d. Applying the error identified in the delayed calibration test, if the error is beyond the maximum permissible error of the measuring equipment.	VVS 238 (b)	→ Not Applicable.	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet	OK	Ok
iv. In cases where the results of the delayed calibration are not available, or the calibration has not been conducted at the time of verification, prior to finalizing verification, were the project participants requested to conduct the required calibration have the project participants calculated the emission reductions conservatively using the approach mentioned in item iii above?	VVS 240	→ Not Applicable.	➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet	OK	Ok
v. Is it possible for the project participants to conduct the calibration at a frequency	VVS 241	→ Not Applicable.	➤ MR version 1.2	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
specified by either the applied methodology, guidance provided by the Board, and/or the registered monitoring plan?			<ul style="list-style-type: none"> ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 		
vi. If no, were the requirements for post registration changes, in section of 9.5 of the VVS, followed?	VVS 241	→ Not Applicable.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
7. Assessment of data and calculation of emission reductions					
i. Is a complete set of data for the specified monitoring period is available?	VVS 245	→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD: ✓ Number of stoves in operation	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 	CAR#3 CAR#4 CAR#5 CAR#6	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>during the verification period[Ny,i]</p> <ul style="list-style-type: none"> ✓ Efficiency of each stove by vintage [η_{new}] ✓ Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [f_{NRB,y}] ✓ Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B_{ybaseline tech}] 	<ul style="list-style-type: none"> ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 		
ii. Has information provided in the monitoring report been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis?	VVS 245	<p>→ Section D.2 of MR along with section B.6.1 of registered CPA-DD has been reviewed. Following parameters are to be monitored as per the registered CPA-DD. PJRCES has cross checked the following parameters:</p> <p><u>Number of stoves in operation during the verification period[Ny,i]</u></p> <p>PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of stoves under operation. It has been found that all the HHs are using CZK stoves and also using the three stone stoves simultaneously.</p> <p><u>Efficiency of each stove by vintage [η_{new}]</u></p>	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	<p>CAR#1 CAR#2 CAR#3 CAR#4 CAR#5 CAR#6 CAR#7 CL#1 CL#2 CL#3</p>	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS /PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		<p>PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of stoves under operation. It has been found that all the WBT tests have been performed in HHs VZK stoves. PJRCES was able to verify the WBT hard and soft copy records.</p> <p>Non-renewable biomass usage in Kenya, as a proportion of total biomass usage [f_{NRB,y}]</p> <p>As per applied methodology and registered CPA-DD, this parameter needs to be monitored yearly by the independent third party. A copy of report has been requested. PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of HHs and collected the information that how wood has been used in stoves. Either by collection from nearby forest or bought from the market.</p> <p>Fuel wood consumption per appliance of baseline stoves continuing to be used in year y of the project activity [B_{ybaseline_tech}]</p> <p>PJRCES has visited the project site during 2 May 2013 to 4 May 2013 and make a survey of stoves under operation. It has been found that all the HHs are using CZK stoves and</p>			



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		also using the three stone stoves simultaneously. We have raised an issue and clarified with PP on this.			
iii. Has on-site fossil fuel consumption, if any, been monitored? Is any emission source missed? Check the site lay-out and confirm through the site visit.	VVS 245	→ PJRCES verified the CZK fuel used and does not found any fossil fuel used in that. It has also found that as per registered CPA-DD and applied methodology no separate project emission estimation procedure has been given.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
iv. Have calculations of baseline emissions, and project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology? Please check if there is a change in emission reductions during the monitoring period from the estimated emission reductions calculated in the included CPA.	VVS 245	<ul style="list-style-type: none"> → PP has applied AMS IIG version 03 in registered CPA-DD and it has been found that baseline emission and leakage emission estimation has been done as per formulae given in methodology and registered CPA-DD. → Section E.5 and E.6 of MR, v01.1 have been reviewed. Number of days under the current monitoring period is 48 days. → Verification team reviewed the registered CPA-DD and was able to confirm that the <i>ex-ante</i> estimation of emission reductions is 48,224 tCO₂e per year. <p>Against the estimated emission reductions,</p>	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
		PP achieved emission reductions to the tune of 1,533 tCO ₂ e , which is less than the <i>ex-ante</i> estimated emission reductions.			
v. Have any assumptions used in emission calculations been justified?	VVS 245	→ PP has applied AMS IIG version 03 in registered CPA-DD and it has been found that all the assumption taken into baseline emission and leakage emission estimation has been considered correctly as given in methodology and registered CPA-DD.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
vi. Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	VVS 245	→ PP has applied AMS IIG version 03 in registered CPA-DD and it has been found that all the emission factors, IPCC default values and other reference values taken into baseline emission and leakage emission estimation has been considered correctly as given in methodology and registered CPA-DD.	<ul style="list-style-type: none"> ➤ MR version 1.2 ➤ CPA-DD version 4.3 dated 11 January 2013 ➤ AMS IIG version 03 ➤ Emission reduction estimation sheet 	OK	Ok
8. Post-Registration Changes					
8.1. Temporary deviations from the registered monitoring plan or applied methodology,					



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
<i>Permanent changes from the registered monitoring plan or applied methodology, changes to the project design of a registered project activity</i>					
i. Confirm the following:					
ii. Is there any change regarding the modalities or information in the MoC statement or its Annexes after a request for registration has been submitted?	PS§207	→ PJRCES has verified the all the registered PoA and CPA No01 documents and does not found any change regarding the modalities or information in the MoC statement or its Annexes after a request for registration has been submitted .	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iii. Has PP revised the MoC statement in accordance with the Project Cycle procedure?	PS§207	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iv. Confirm whether the DOE contracted by PP to validate post-registration changes, accredited to the validation function for the specific CDM sectoral scope	247 PS§208	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
v. If project participants are temporarily unable to monitor the included CPA or the registered PoA in accordance with the registered monitoring plan or the applied methodology, confirm following:	PS§209	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST		REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
		VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
vi.	Has PP described the nature, extent and duration of the non-conforming monitoring?	PS§209	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
vii.	Cases where PP has not monitored or is unable to produce the evidence related to baseline emissions parameter(s) – determine whether prior approval from Board is required?	PS Appendix 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
viii.	Cases where PP has not monitored or is unable to produce the evidence related to project emissions parameter(s) – determine whether prior approval from Board is required?	PS Appendix 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
ix.	Has PP proposed alternative monitoring of the project activity in the monitoring report?	PS§209	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
x.	Please confirm If the change from the registered monitoring plan or applied methodology is permanent.	PS Appendix 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
xi. Please confirm if the proposed or actual changes to the project design of a included CPA or registered PoA adversely impact any of the following: <ul style="list-style-type: none"> - The applicability and application of the applied methodology under which the project activity has been registered. - The additionality of the project activity - The scale of the project activity. 	PS Appendix 1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
8.2. Corrections					
i. Is there any corrections made to the project information or the parameters determined at validation by PP and identified during verification?	VVS 258	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
ii. Do such corrections affect the design of the registered project activity?	PS Appendix 1; §1	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
iv. Is the corrected information accurately reflects the actual project information?	VVS 258(a)	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

VERIFICATION REQUIREMENT CHECKLIST	REF. §§	VERIFICATION TEAM COMMENTS		CONCLUSION	
	VVS/PS/PCP	COMMENTS	EVIDENCE	DRAFT	FINAL
v. Is the corrected parameter(s) in accordance with the applied methodology?	VVS 258(b)	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
8.3. Change in the Start date of the crediting period					
i. Does PP wish to change the start date of the crediting period in accordance with section 12.8 of CDM Project Standard?	VVS 260	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok
ii. Confirm if the change in the start date of crediting period results in the less conservative baseline.	VVS 260	→ Not Applicable	https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U/view	OK	Ok



VERIFICATION CHECKLIST – VVSv7.0

TABLE 2: RESOLUTION OF ISSUES IDENTIFIED IN TABLE 1 OF THE VERIFICATION CHECKLIST

CPA No:1- Efficient Cook Stove Programme: Kenya CPA No. 1 Eldoret East and Keiyo Districts co2balance UK Ltd

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
CAR#1	Assessment: 01, Date: 17 May 2013			
	MR version 1.2 dated 8 April 2013 section D does not has details formulae about how sample estimation has been estimated. Please justify	2(iii)	Formula of both equations used to estimate sample size are now included in the MR (section D3). Tables summarising the sampling plan are expanded to include all parameters used in the equations.	PJRCES has reviewed the revised MR version 1.3 dated 23 May 2013 section D and found that PP has correctly updated the formulae for sample estimation. But the parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.
CAR#1.1	Assessment:02, Dated 29 May 2013			
	Parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.		The parameters used in the formulae and how they have been derived are clearly described in MR section E.1. calculations and in attached WBT and US sheets for CPA 1 and CPA 2 which are now included in POA ERs v3.	PJRCES has reviewed the revised MR and emission reduction estimation sheet and found all correction correct. This CAR#1.1 is closed.



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
CAR#2	Assessment: 01 Date: 17 May 2013			
	PP needs to clarify that how 142 numbers of HHs survey are inline with " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2 and AMS IIG version 03.	3(i)	The number of 142 was calculated using the formula given in " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2. n=142 is significantly more households than required as calculated by the equation (n=89) assuming a conservative 75% usage proportion.	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of HHs Survey was not found. With reference to " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae and parameters values have not been clearly defined. Present clear calculation in separate excel sheet.
CAR#2.1	Assessment:02, Dated 29 May 2013			
	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of HHs Survey not found. With reference to " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae and parameters values have not been clearly defined. Present clear calculation in separate excel sheet.		The usage parameter calculation sheet for CPA 1 and 2 has been supplied in POA 5336 and included as tabs. References for how these parameters are calculated are already included in the MR section E.1.	PJRCES has reviewed the revised MR and emission reduction estimation sheet. PP has clearly added the HHs survey estimation method and formula. It is as per " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2 and AMS IIG version 03. It is found to be OK. This CAR#2.1 is closed.



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
CAR#3	Assessment: 01 Date: 17 May 2013			
	Justify that all WBT performed during sampling are conducted by a well-trained staff, with prior experience conducting WBTs and recording the results. Please provide the evidence that that all the staff which has performed WBT tests are sufficiently trained.	3(i)	Record of WBT experience for the two members of staff who conducted these tests now supplied.	PJRCES reviewed the provided training records of monitoring and project management staff. Training programme was organised by Co2banlce on dated 5 July 2012 and 14 January 2013. Their training agenda and attendance sheet was checked and it was found satisfactory. This CAR#3 is closed.
CAR#4	Assessment: 01 Date: 17 May 2013			
	PP to provide the third party independent report in support of f_{NRB} value 0.92 considered during current monitoring period 21 March 2012 to 20 March 2013.	3(i)	CPA dd states that an independent report will be used during monitoring. PP has followed the guidance issued by EB 67 Annex 22 (para 3) in which <i>"Project proponents have an option to use these conservative country-specific default values or determine project-specific values by undertaking a study in the project region as prescribed in the methodology"</i> The CDM default value of 0.92 was accepted by the Kenya DNA on 19/09/2012 and it is this conservative, independent value that is applied instead of a third party report.	As per registered CPA DD section B 5.1, f_{NRB} , non-renewable biomass factor will be reassessed during each monitoring period. As per registered CPA DD section B.6.1, f_{NRB} will be monitored by independent third party report for the applicable monitoring period. PJRCES team also reviewed the validation report section 3.4 which clearly says <i>"Non-renewable biomass usage in Kenya, as a proportion of total biomass usage will be monitored ex post using the latest FAO data"</i> . Please justify the f_{NRB} value in line with above registered monitoring plan.



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	Assessment:02 Dated 29 May 2013			
CAR#4.1	<p>As per registered CPA DD section B 5.1, f_{NRB}, non-renewable biomass factor will be reassessed during each monitoring period. As per registered CPA DD section B.6.1, f_{NRB} will be monitored by independent third party report for the applicable monitoring period. PJRCES team also reviewed the validation report section 3.4 which clearly says <i>"Non-renewable biomass usage in Kenya, as a proportion of total biomass usage will be monitored ex post using the latest FAO data"</i>.</p> <p>Please justify the f_{NRB} value in line with above registered monitoring plan.</p>		<p>The comment in the validation report Section 3.4 was made by BV in their summary of our approach and is not entirely correct as at no point in our own documents do we state that FAO data must be used.</p> <p>There are differences in the provenance of f_{NRB} for <i>monitoring</i> sections in POA DD – E.7.1 (Independent report), CPA 1 DD - B6.1 (independent report) and CPA 2 DD - B6.1 (Report), however none state that <i>third party</i> independent reports must be used. The baseline was identified using a third party report, as summarised by BV and co2balance in project documents, however, no such prescription from co2balance states we will use a third party to define project f_{NRB} by monitoring.</p> <p>We state that an independent third party report must be used and it must be reassessed during each monitoring period as per AMS ii G. The approach approved by the</p>	<p>PJRCES has reviewed the provided justification of f_{NRB} value by PP and also checked the f_{NRB} value from SSC WG 37 Annex 14 which is given as 0.92. As per this information note, 0.92 is applicable as of 31 December 2010. But it is not clear that for which period of data has been used to arrived at this 0.92. PP needs to justify the relevance to 0.92 for the monitoring period of 21/3/12 to 20/3/13 in light of EB guidelines/clarifications.</p>



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
			<p>CDM EB (EB 67, annex 22) is consistent with and was developed using the guidance given in AMS iiG. The default NRB (0.92) applied in our monitoring report has been approved by the Kenyan DNA, so it is independent of co2balance (and furthermore is also third party.) We therefore assert that it meets the requirements of the methodology, our monitoring plan and also the requirements of the CDM EB as they have authored/approved the report.</p> <p>Finally, SSC WG 37 Annex 14 para 4² confirms that the figure of 0.92 is applicable as of 31 December 2010 and so therefore applicable to this monitoring period of 21/3/12 to 20/3/13</p>	
CAR#4.2	PJRCES has reviewed the provided justification of f_{NRB} value by PP and also checked the f_{NRB} value from SSC WG 37 Annex 14 which is given as 0.92. As per this		PP has reassessed the f_{NRB} in accordance with the guidance in AMS ii G and following the study methodology of the default f_{NRB} calculation. A figure of 0.92 has	PJRCES has reviewed the presented assessment of f_{NRB} by PP which has used the data from FAO Forest Resource Assessment 2010 (Kenya). It is found that a figure of 0.92 has been arrived. PJRCES has also found that EB has also define default values of fraction

² http://cdm.unfccc.int/Panels/ssc_wg/meetings/037/ssc_37_an14.pdf



VERIFICATION CHECKLIST - VV5v7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	information note, 0.92 is applicable as of 31 December 2010. But it is not clear that for which period of data has been used to arrived at this 0.92. PP needs to justify the relevance to 0.92 for the monitoring period of 21/3/12 to 20/3/13 in light of EB guidelines/clarifications.		been calculated for the year 2012, extrapolated from the 2010 FRA data which was used in the default calculation accepted by the host country. A figure of 0.92 is therefore applied for this monitoring period. Supporting XL supplied to PJR for review.	of non-renewable biomass for Kenya which is 0.92. (http://cdm.unfccc.int/DNA/fNRB/index.html). So it is appropriate to consider fNRB value for current monitoring period as 0.92 is OK. This CAR#4.2 is closed.
CAR#5	Assessment: 01 Date: 17 May 2013			
	PP to clarify that how B _{ybaseline_tech} parameter has been monitored and taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter B _{ybaseline_tech} as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.	5(v)	B y baseline tech has now been included as a monitored parameter (section D2) and the equations changed (POA 5336 ERs XL) accordingly.	PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Kaptagat ERs" spreadsheet, "Correction for continued Baseline" has been considered as 0.33 and B _{ybaseline_tech} has been estimated as 1.314. But how 0.33 has been arrived for that no reference has been found. Clearly present the calculation and input parameter with references.
CAR#5.1	Assessment:02, Dated 29 may 2013			
	PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Kaptagat ERs" spreadsheet "Correction for continued Baseline" has been considered as 0.33 and B _{ybaseline_tech}		The usage parameter calculation sheet for CPA 1 and 2 has been supplied. References for how these parameters are calculated are already included in the MR section E.1. All monitoring	PJRCES has reviewed the uses survey data for the CPA1. It was also cross checked during verification team site visit from 1 May 2013 to 4 May 2013. The correction factor for continued baseline was estimated as 0.33 and it was verified by PJRCES. It is found to be OK.



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	has been estimated as 1.314. But how 0.33 has been arrived for that no reference has been found. Clearly present the calculation and each input parameter with references.		parameters and formulae used in ER calculations (POA ER v3) are traceable for transparency.	This CAR#5.1 is closed.
CAR#6	Assessment: 01 Date: 17 May 2013			
	As required by §193 of CDM Project Standard, v02.1; PP clearly provided line diagrams showing all relevant monitoring points in MR section C.	5(v)	Flow diagram showing roles and responsibilities of the monitoring process now included in section C3	PJRCES has reviewed the revised MR version 1.3 dated 23 May 2013 and found that PP has added line diagrams showing all relevant monitoring points. It is found to OK. This CAR#6 is closed.
CAR#7	Assessment: 01 Date: 17 May 2013			
	Please provide the training records for the project monitoring staff	5(x)	2 separate training agendas have been supplied in addition to the initial 2 days training that each member of staff receives before starting work. All CPOs (project monitoring staff) are supported and trained by a Monitoring and Education coordinator (themselves former project monitoring field staff)	PJRCES reviewed the provided training records of monitoring and project management staff. Training programme was organised by Co2banlce on dated 5 July 2012 and 14 January 2013. Their training agenda and attendance sheet was checked and it was found satisfactory. This CAR#7 is closed.
CL#1	Assessment: 01 Date: 17 May 2013			
	PP needs to clarify that how B _{ybaseline_tech} parameter has been	3(i)	B _y baseline tech as a monitoring parameter is now described in	PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Kaptagat ERs"



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	monitored and taken into account in estimation of emission reduction that if three stone stoves are still operational.		section C3 (point number 3 of monitoring plan). fNRB now also included.	spreadsheet "Correction for continued Baseline" has been considered as 0.33 and $B_{ybaseline_tech}$ has been estimated as 1.314. But how 0.33 has been arrived for that no reference has been found. Clearly present parameter with reference and how it has been arrived.
CL1.1	Assessment:02 Dated 29 May 2013 PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Kaptagat ERs" spreadsheet "Correction for continued Baseline" has been considered as 0.33 and $B_{ybaseline_tech}$ has been estimated as 1.314. But how 0.33 has been arrived for that no reference has been found. Clearly present parameter with reference and how it has been arrived.		The parameters used in the formulae and how they have been derived are clearly described in attached WBT and US sheets for CPA 1 and CPA 2 which are now included in POA ERs v3. This is also explained in the MR section E.1. calculations and also D.2. All monitoring parameters and formulae used in ER calculations (POA ER v3) are traceable for transparency and reference source is included.	PJRCES has reviewed the uses survey data for the CPA1. It was also cross checked during verification team site visit from 1 May 2013 to 4 May 2013. The correction factor for continued baseline was estimated as 0.33 and it was verified by PJRCES. It is found to be OK. This CL#1.1 is closed.
CL#2:	Assessment: 01 Date: 17 May 2013 PP to clarify that how 21 WBTs tests has been estimated. Clearly define the formula under which it has been arrived following AMS-II.G/Version 03 and the "Guidelines			
	PP to clarify that how 21 WBTs tests has been estimated. Clearly define the formula under which it has been arrived following AMS-II.G/Version 03 and the "Guidelines	5(iv)	Formula for sampling quantity of 21 WBTs now included in section D3. Result meets 95/5 required for biennial monitoring.	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of number of WBT tests not found. With reference to "Guidelines for sampling and surveys for CDM project activities and programme of



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	<i>for sampling and surveys for CDM project activities and programme of activities</i> version 1.2			<i>activities</i> version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.
CL#2.1	Assessment:02 Dated 29 May 2013 PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of number of WBT tests not found. With reference to " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet		The number of WBT calculations have now been included as tabs in POA 5336 ERs v3. Parameters used in the formulae have been clearly defined and explained. This is also explained in the MR section E.1. calculations	PJRCES has reviewed the revised MR and emission reduction estimation sheet. PP has clearly added the WBT tests survey estimation method and formula. It is as per " <i>Guidelines for sampling and surveys for CDM project activities and programme of activities</i> " version 1.2 and AMS IIG version 03. It is found to be OK. This CL#2.1 is closed.
	Assessment: 01 Date: 17 May 2013			
CL#3	Please clarify that why any procedures for emergency and abnormal situations been described.	5(ix)	Procedures for emergency and abnormal situations are clearly described to all employees and contractors upon starting work with the company. These are detailed in the document	PJRCES has reviewed the provided supporting documents for procedures for emergency and abnormal situations. Please provide the clarification regarding procedures for emergency and abnormal situations in monitoring of project parameters as per registered monitoring plan.



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
			'Emergency and Abnormal Procedures' supplied. We also provide a yearly refresher training for employees (agenda for July 2012 is supplied as evidence of this)	
CL#3.1	Assessment:02 Dated 29 May 2013 PJRCES has reviewed the provided supporting documents for procedures for emergency and abnormal situations. Please provide the clarification regarding procedures for emergency and abnormal situations in monitoring of project parameters as per registered monitoring plan.		The emergency and abnormal procedures document does pertain to abnormal procedures during monitoring. Attention is drawn to the following point in the supplied document "Actual or potential shortfall in the written processes/procedures or a problem in the practical application of them" All of our monitoring processes are supported by documentation that acts as a reference guide for staff following their training. If staff identify problems with practical application of their training or the documentation i.e. an abnormal situation then the action log procedure is followed. The aforementioned monitoring documentation (KPT and WBT guidance) is supplied in support of	PJRCES has reviewed the PP response and found that all the monitoring parameters and default parameters are supported by proper documentation. All the documentation and monitoring has been done as per applied methodology AMS IIG version 03 and other applicable EB guidelines. So It is found OK This CL#3.1 is closed.



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
			this.	
	Assessment: 01 Date: 17 May 2013			
CL#5	PJRCES has found in registered CPA –DD section B.2 that “ <i>The geographical boundary of each CPA will be within the geographic boundaries of the Republic of Uganda, consistent with that set in the PoA</i> ”. Please clarify	3(iii)	This is a typo and only occurs once. The correct information is that all CPAs will be included in the Country of <u>Kenya</u> is supported by the information given in A.3, A4.1.1 and A4.1.2. along with numerous other references and the POA title. This was picked up during inclusion of CPA 2, hence why this typo only appears in CPA 1.	PJRCES has visited the project site during 1 May 2013 to 6 May 2013 and found that project is in Kenya. It was clearly confirm during site visit. In registered CPA DD section A.4 clearly show that project is located in Kenya. This CL#5 is Closed.
	Assessment: 01 Date: 17 May 2013			
CL#6	PP is requested to demonstrate the accuracy of the water boiling test done for arriving at the actual efficiency of the project improved stoves.	5(vi)	The accuracy of the water boiling test is as follows: All weights are +/- 0.01kg Temperatures are +/- 1 deg C Which correspond to the accuracy of the instruments used in the original stove efficiency test (POA 5336: Annex 5) The results meet 95/5 confidence precision	Please provide the records of calibration for the instruments (weighing scale, Thermometer) used in the WBT tests.
CL#6.1	Assessment:02 Dated 29 May 2013			
	Please provide the records of calibration for the instruments		As per the guidance from the UNFCCC (paragraph 17 (C)	PJRCES has reviewed the PP response and supporting document regarding weighing scale and



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	(weighing scale, Thermometer) used in the WBT tests.		<p>General Guidelines to SSC Methodologies)</p> <p><i>"Measuring equipment should be certified to national or IEC standards and calibrated according to the national standards and reference points or IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once in three years;"</i></p> <p>The Kenyan Bureau of Standards does not stipulate any requirement for calibration frequency of OIML (International Organisation of Legal Metrology) Class M3 weighing instruments (low accuracy)</p> <p>There is no IEC standard stipulated for calibration of weighing equipment of Class M3 (low accuracy) – other than 'calibration should be performed regularly'.</p> <p>As the scale and thermometer manufacturer has not stipulated a calibration interval, we will calibrate or replace (whichever is cheaper) all of our weighing scales and thermometers every three</p>	<p>thermometer used during WBT tests. It is found to be OK.</p> <p>This CL#6.1 is closed.</p>



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
			<p>years.</p> <p>The start date of the POA baseline study was February 2010; we replaced all our original scales on 18/05/2011, which means we are due to replace our scales again on 17/05/2014. Receipts for these scales replacements supplied.</p> <p>We did not use thermometers in the baseline study; hence our thermometers were purchased brand new. Receipts are dated 26/06/2012, which means we are due to replace these on 25/06/2015.</p>	
	Assessment: 01 Date: 17 May 2013			
CL#7	Please provide the environment impact report as mentioned in CPA-DD (Section C.3) approved by Kenya's National Environment Management Authority for CPA01.	CPA-DD section C	EIA report supplied (annex 6)	<p>PJRCES verification team has reviewed the EIA report which was prepared by Mr. Nicholas Ngece. It was found OK.</p> <p>This CL#7 closed.</p>
	Assessment: 01 Date: 17 May 2013			
CL#8	Please provide the no objection certificate by The National Environment Management Authority (NEMA) that each SSC-CPA under the programme meets the	CPA-DD section C	EIA approval supplied (annex 10)	<p>PJRCES has reviewed the No Objection Certificate by The National Environment Management Authority (NEMA) letter dated 5 July 2011 which is valid for 2 year from date of issue. The current verification is till 20 March 2013 which well within the NOC range. It is</p>



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
	environmental requirements of the Environment Management Coordination Act (EMCA) of 1999.			found to be OK. This CL#8 is Closed.

CPA No:2- Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL No	DESCRIPTION OF CAR/CL	REFERENCE		
CAR#1	Assessment: 01 Date: 17 May 2013			
	MR version 1.2 dated 8 April 2013 section D does not has details formulae about how sample estimation has been estimated. Please justify	2(iii)	Formula of both equations used to estimate sample size are now included in the MR (section D3). Tables summarising the sampling plan are expanded to include all parameters used in the equations.	PJRCES has reviewed the revised MR version 1.3 dated 23 May 2013 section D and found that PP has correctly updated the formulae for sample estimation. But the parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.
CAR#1.1	Assessment:02, Dated 29 May 2013			
	Parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.		The parameters used in the formulae and how they have been derived are clearly described in the MR section E.1. calculations and in attached WBT and US sheets for CPA 1 and CPA 2 which are now included in POA ERs v3. All monitoring parameters and formulae used in ER calculations (POA	PJRCES has reviewed the revised MR and emission reduction estimation sheet and found all correction correct. This CAR#1.1 is closed.



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
			ER v3) are traceable for transparency.	
CAR#2	Assessment: 01 Date: 17 May 2013			
	PP needs to clarify that how 122 numbers of HHs survey are inline with "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG version 03.	3(i)	The number of 142 was calculated using the formula given in "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2. n=142 is significantly more households than required as calculated by the equation (n=89) assuming a conservative 75% usage proportion.	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of HHs Survey not found. With reference to "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae and parameters values have not been clearly defined. Present clear calculation in separate excel sheet.
	Assessment:02, Dated 29 May 2013			
CAR#2.1	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of HHs Survey not found. With reference to "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae and parameters values have not been clearly defined. Present clear calculation in separate excel sheet.		The usage parameter calculation sheet for CPA 1 and 2 has been supplied. References for how these parameters are calculated are already included in the MR section E.1. All monitoring parameters and formulae used in ER calculations (POA ER v3) are traceable for transparency and reference source is included.	PJRCES has reviewed the revised MR and emission reduction estimation sheet. PP has clearly added the HHs survey estimation method and formula. It is as per "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG version 03. It is found to be OK. This CAR#2.1 is closed.
CAR#3	Assessment: 01 Date: 17 May 2013			



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	Justify that all WBT performed during sampling are conducted by a well-trained staff, with prior experience conducting WBTs and recording the results. Please provide the evidence that that all the staff which has performed WBT tests are sufficiently trained.	3(i)	Record of WBT experience for the two members of staff who conducted these tests now supplied.	PJRCES reviewed the provided training records of monitoring and project management staff. Training programme was organised by Co2banlce on dated 5 July 2012 and 14 January 2013. Their training agenda and attendance sheet was checked and it was found satisfactory. This CAR#3 is closed.
CAR#4	Assessment: 01 Date: 17 May 2013			
	PP to provide the third party independent report in support of f_{NRB} value 0.92 considered during current monitoring period 21 March 2012 to 20 March 2013.	3(i)	CPA dd states that an independent report will be used during monitoring. PP has followed the guidance issued by EB 67 Annex 22 (para 3) in which <i>"Project proponents have an option to use these conservative country-specific default values or determine project-specific values by undertaking a study in the project region as prescribed in the methodology"</i> The CDM default value of 0.92 was accepted by the Kenya DNA on 19/09/2012 and it is this conservative, independent value that is applied instead of a third party report.	As per registered CPA DD section B 5.1, f_{NRB} , non-renewable biomass factor will be reassessed during each monitoring period. As per registered CPA DD section B.6.1 f_{NRB} will be monitored by independent third party report for the applicable monitoring period. PJRCES team also reviewed the validation report section 3.6 which clearly says f_{NRB} will be monitored ex post using the latest data. Please justify the f_{NRB} value in line with above registered monitoring plan.
	Assessment:02 Dated 29 May 2013			
CAR#4.1	As per registered CPA DD section B 5.1, f_{NRB} , non-renewable biomass factor will be reassessed during each		The comment in the validation report Section 3.4 was made by BV in their summary of our approach and is not	PJRCES has reviewed the provided justification of f_{NRB} value by PP and also checked the f_{NRB} value from SSC WG 37



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	<p>monitoring period. As per registered CPA DD section B.6.1 f_{NRB} will be monitored by independent third party report for the applicable monitoring period. PJRCES team also reviewed the validation report section 3.6 which clearly says f_{NRB} will be monitored ex post using the latest data.</p> <p>Please justify the f_{NRB} value in line with above registered monitoring plan.</p>		<p>entirely correct as at no point in our own documents do we state that FAO data must be used.</p> <p>There are differences in the provenance of f_{NRB} for <i>monitoring</i> sections in POA DD – E.7.1 (Independent report), CPA 1 DD - B6.1 (independent report) and CPA 2 DD - B6.1 (Report), however none state that <i>third party</i> independent reports must be used. The baseline was identified using a third party report, as summarised by BV and co2balance in project documents, however, no such prescription from co2balance states we will use a third party to define project f_{NRB} by monitoring.</p> <p>We state that an independent third party report must be used and it must be reassessed during each monitoring period as per AMS ii G. The approach approved by the CDM EB (EB 67, annex 22) is consistent with and was developed using the guidance given in AMS iiG. The default NRB (0.92) applied in our monitoring report has been approved by the Kenyan DNA, so it is independent of co2balance (and furthermore is also third party.) We therefore assert that it meets the</p>	<p>Annex 14 which is given as 0.92. As per this information note, 0.92 is applicable as of 31 December 2010. But it is not clear that for which period of data has been used to arrived at this 0.92. PP needs to justify the relevance to 0.92 for the monitoring period of 21/3/12 to 20/3/13 in light of EB guidelines/clarifications.</p>



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
			<p>requirements of the methodology, our monitoring plan and also the requirements of the CDM EB as they have authored/approved the report.</p> <p>Finally, SSC WG 37 Annex 14 para 4³ confirms that the figure of 0.92 is applicable as of 31 December 2010 and so therefore applicable to this monitoring period of 21/3/12 to 20/3/13</p>	
CAR#4.2	<p>PJRCES has reviewed the provided justification of f_{NRB} value by PP and also checked the f_{NRB} value from SSC WG 37 Annex 14 which is given as 0.92. As per this information note, 0.92 is applicable as of 31 December 2010. But it is not clear that for which period of data has been used to arrived at this 0.92. PP needs to justify the relevance to 0.92 for the monitoring period of 21/3/12 to 20/3/13 in light of EB guidelines/clarifications.</p>		<p>PP has reassessed the f_{NRB} in accordance with the guidance in AMS ii G and following the study methodology of the default f_{NRB} calculation. A figure of 0.92 has been calculated for the year 2012, extrapolated from the 2010 FRA data which was used in the default calculation accepted by the host country.</p> <p>A figure of 0.92 is therefore applied for this monitoring period. Supporting XL supplied to PJR for review.</p>	<p>PJRCES has reviewed the presented assessment of f_{NRB} by PP which has used the data from FAO Forest Resource Assessment 2010 (Kenya). It is found that a figure of 0.92 has been arrived. PJRCES has also found that EB has also define default values of fraction of non-renewable biomass for Kenya which is 0.92. (http://cdm.unfccc.int/DNA/fNRB/index.html). So it is appropriate to consider f_{NRB} value for current monitoring period as 0.92 is OK.</p> <p>This CAR#4.2 is closed.</p>
CAR#5	<p>Assessment: 01 Date: 17 May 2013</p> <p>PP to clarify that how $B_{y\text{baseline_tech}}$ parameter has been monitored and</p>			
		5(v)	<p>$B_{y\text{baseline_tech}}$ has now been included as a monitored parameter</p>	<p>PJRCES has reviewed the revised MR version 02 and emission reduction sheet</p>

³ http://cdm.unfccc.int/Panels/ssc_wg/meetings/037/ssc_37_an14.pdf



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	taken into account that if they are still baseline stoves operating or are replaced by an equivalent in service appliance. The parameter $B_{y_{baseline_tech}}$ as observed from the registered CPA-DD is a monitoring parameter whereas the same is not evident as monitoring parameter in section D.2 of MR.		(section D2) and the equations changed (POA 5336 ERs XL) accordingly.	also. In "Kaptagat ERs" spreadsheet "Correction for continued Baseline" has been considered as 0.16 and $B_{y_{baseline_tech}}$ has been estimated as 0.846. But how 0.16 has been arrived for that no reference has been found. Clearly present the calculation and input parameter with references.
	Assessment: 02, Dated 29 May 2013			
CAR#5.1	PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Kaptagat ERs" spreadsheet "Correction for continued Baseline" has been considered as 0.16 and $B_{y_{baseline_tech}}$ has been estimated as 0.846. But how 0.16 has been arrived for that no reference has been found. Clearly present the calculation and input parameter with references.		The usage parameter calculation sheet for CPA 1 and 2 has been supplied. References for how these parameters are calculated are already included in the MR section E.1. All monitoring parameters and formulae used in ER calculations (POA ER v3) are traceable for transparency.	PJRCES has reviewed the uses survey data for the CPA1. It was also cross checked during verification team site visit from 1 May 2013 to 4 May 2013. The correction factor for continued baseline was estimated as 0.16 and it was verified by PJRCES. It is found to be OK. This CAR#5.1 is closed.
CAR#6	Assessment: 01 Date: 17 May 2013			
	As required by §193 of CDM Project Standard, v02.1; PP clearly provided line diagrams showing all relevant monitoring points in MR section C.	5(v)	Flow diagram showing roles and responsibilities of the monitoring process now included in section C3	PJRCES has reviewed the revised MR version 1.3 dated 23 May 2013 and found that PP has added line diagrams showing all relevant monitoring points. It is found to OK. This CAR#6 is closed.
CAR#7	Assessment: 01			



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	Date: 17 May 2013 Please provide the training records for the project monitoring staff.	5(x)	2 separate training agendas have been supplied in addition to the initial 2 days training that each member of staff receives before starting work. All CPOs (project monitoring staff) are supported and trained by a Monitoring and Education coordinator (themselves former project monitoring field staff)	PJRCES reviewed the provided training records of monitoring and project management staff. Training programme was organised by Co2banlce on dated 5 July 2012 and 14 January 2013. Their training agenda and attendance sheet was checked and it was found satisfactory. This CAR#7 is closed.
CL#1	Assessment: 01 Date: 17 May 2013 PP needs to clarify that how $B_{ybaseline_tech}$ parameter has been monitored and taken into account in estimation of emission reduction that if three stone stoves are still operational.	3(i)	$B_{ybaseline_tech}$ as a monitoring parameter is now described in section C3 (point number 3 of monitoring plan). fNRB now also included.	PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Mathira ERs" spreadsheet "Correction for continued Baseline" has been considered as 0.16 and $B_{ybaseline_tech}$ has been estimated as 0.846. But how 0.16 has been arrived for that no reference has been found. Clearly present parameter with reference and how it has been arrived.
CL#1.1	Assessment:02 Dated 29 May 2013 PJRCES has reviewed the revised MR version 02 and emission reduction sheet also. In "Mathira ERs" spreadsheet "Correction for continued Baseline" has been considered as 0.16 and $B_{ybaseline_tech}$ has been estimated		The parameters used in the formulae and how they have been derived are clearly described in attached WBT and US sheets for CPA 1 and CPA 2 which are now included in POA ERs v3.	PJRCES has reviewed the uses survey data for the CPA1. It was also cross checked during verification team site visit from 1 May 2013 to 4 May 2013. The correction factor for continued baseline was estimated as 0.16 and it was verified



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	as 0.846. But how 0.16 has been arrived for that no reference has been found. Clearly present parameter with reference and how it has been arrived.		The parameter is explained in the MR section E.1 calculations and also D.2 All monitoring parameters and formulae used in ER calculations (POA ER v3) are traceable for transparency..	by PJRCES. It is found to be OK. This CAR#1.1 is closed.
CL#2:	Assessment: 01 Date: 17 May 2013			
	PP to clarify that how 22 WBTs tests has been estimated. Clearly define the formula under which it has been arrived following AMS-II.G/Version 03 and the "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2	5(iv)	Formula for sampling quantity of 21 WBTs now included in section D3. Result meets 95/5 required for biennial monitoring.	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of number of WBT tests not found. With reference to "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG version 03, PP needs to provide clearly formulae used. Parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.
CL#2.1	Assessment:02 Dated 29 May 2013			
	PJRCES has reviewed the revised MR version 1.3 and emission reduction sheet "PoA 5336 ERs V2.xls". Clear calculation of number of WBT tests not found. With reference to "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG		Number of WBT calculations have now been included as sheets in POA 5336 ERs v3. Parameters used in the formulae have been clearly defined and explained. This is also explained in the MR section E.1 calculations.	PJRCES has reviewed the revised MR and emission reduction estimation sheet. PP has clearly added the WBT tests survey estimation method and formula. It is as per "Guidelines for sampling and surveys for CDM project activities and programme of activities" version 1.2 and AMS IIG version 03. It is found to be OK.



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	version 03, PP needs to provide clearly formulae used. Parameters used in the formulae have not been clearly defined and how it's values has been considered. Present clear calculation in separate excel sheet.			This CL#2.1 is closed.
	Assessment: 01 Date: 17 May 2013			
CL#3	Please clarify that why any procedures for emergency and abnormal situations been described.	5(ix)	Procedures for emergency and abnormal situations are clearly described to all employees and contractors upon starting work with the company. These are detailed in the document 'Emergency and Abnormal Procedures' supplied. We also provide a yearly refresher training for employees. (agenda for July 2012 is supplied as evidence of this)	PJRCES has reviewed the provided supporting documents for procedures for emergency and abnormal situations. Please provide the clarification regarding procedures for emergency and abnormal situations in monitoring of project parameters as per registered monitoring plan.
CL#3.1	Assessment:02 Dated 29 May 2013			
	PJRCES has reviewed the provided supporting documents for procedures for emergency and abnormal situations. Please provide the clarification regarding procedures for emergency and abnormal situations in monitoring of project parameters as per registered monitoring plan.		The emergency and abnormal procedures document does pertain to abnormal procedures during monitoring. Attention is drawn to the following point in the supplied document "Actual or potential shortfall in the written processes/procedures or a problem in the practical application of them" All of our monitoring processes are supported by documentation that acts	PJRCES has reviewed the PP response and found that all the monitoring parameters and default parameters are supported by proper documentation. All the documentation and monitoring has been done as per applied methodology AMS IIG version 03 and other applicable EB guidelines. So It is found OK This CL#3.1 is closed.



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
			<p>as a reference guide for staff following their training. If staff identify problems with practical application of their training or the documentation i.e. an abnormal situation then the action log procedure is followed.</p> <p>The aforementioned monitoring documentation (KPT and WBT guidance) is supplied in support of this.</p>	
	Assessment: 01 Date: 17 May 2013			
CL#4	Please make correction in emission reduction estimation in MR and emission reduction sheet for CPA02 as it's crediting period start from 1 st March 2013.	1(iv)	PP has not corrected this date as the date of inclusion is 31/01/13. The crediting of CPA 1 is the date of registration/inclusion (21/03/13) so it follows that CPA 2 must also be the date of inclusion.	With reference to UNFCCC website reference, CPA 02 has been included on 31 January 2013 but crediting period has been started at 1 March 2013. Please refer http://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/FBHO687TZPX4M0JEG92QLYUINKCV1A/view
CL#4.1	<p>Assessment:02 Dated 29 May 2013</p> <p>With reference to UNFCCC website reference, CPA 02 has been included on 31 January 2013 but crediting period has been started at 1 March 2013. Please refer http://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/FBHO687TZPX4M0JEG92QLYUINKCV1A/view</p>		This is an administrative error as the statement in the CPA dd (section A4.3.1) states that the crediting period will be the date of inclusion. The POA dd states in section B.1 "The start of the crediting period for any CPA under the proposed PoA shall be the date of its inclusion to the PoA."	PJRCES has reviewed the PP response and registered CPA-DD for CPA2. It was found in <i>A.4.3.1. Starting date of the crediting period</i> that crediting period start date has been mentioned as 1 March 2013 although the written statement it is as "The start date of the crediting period is the date of inclusion of



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
			<p>01/03/2013 was listed as the <i>assumed</i> date of inclusion as a defined date in the form DD/MM/YYYY was required by BV during inclusion validation. This date was given based on an average 3 months validation process.</p> <p>The following is an excerpt from the CAR table (FVR supplied to PJRCS): PP: The expected start date of the crediting period has been updated in the required format. The actual start date will be the date of inclusion into the POA. DOE: The revised date is OK, CAR 2 is closed out.</p> <p>Please also refer to section A.9.1.2 in FVR which confirms that the crediting period should have been revised to the date of inclusion</p> <p>PP therefore maintains that the crediting period should be that stipulated by us in our POAdd and the CPA dd (date of inclusion), rather than what we were required to put in order to satisfy document review.</p>	<p><i>CPA 2 in the registered PoA.</i> In the UNFCCC interface it is also showing crediting period as 01 Mar 2013 - 29 Feb 2020 (Renewable) and date of inclusion as 31 January 2013. Based on all above discussion and evidences it is found that crediting period start date is not as same as date of inclusion of CPA. Please take this matter with EB and make the correction accordingly.</p>
CL#4.2	PJRCS has reviewed the PP response and registered CPA-DD for CPA2. It was found in A.4.3.1.		Crediting period for CPA now listed as 31/01/2013-30/01/2020 on the UNFCCC website following EB	PJRCS has reviewed the details of PoA and included CPA information at http://cdm.unfccc.int/ProgrammeOfActivit



VERIFICATION CHECKLIST - VV5v7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	<p><i>Starting date of the crediting period</i> that crediting period start date has been mentioned as 1 March 2013 although the written statement it is as <i>"The start date of the crediting period is the date of inclusion of CPA 2 in the registered PoA."</i> In the UNFCCC interface it is also showing crediting period as 01 Mar 2013 - 29 Feb 2020 (Renewable). Based on all above discussion and evidences it is found that crediting period start date is not as same as date of inclusion of CPA. Please take this matter with EB and make the correction accordingly.</p>		correction of the date.	<p>ies/gotoPoA?id=GND0CTW7MQ6ZJ2IE5XA4KL3SF1YP9U . It is found that CPA 5336-0002 : Efficient Cook Stove Programme: Kenya – CPA No. 2 Mathira East District co2balance UK Ltd crediting period has been revised as 31 Jan 2013 - 30 Jan 2020 (Renewable) which found to be OK.</p> <p>This CL#4.2 is closed.</p>
	<p>Assessment: 01 Date: 17 May 2013</p>			
CL#5	PP is requested to demonstrate the accuracy of the water boiling test done for arriving at the actual efficiency of the project improved stoves.	5 (vi)	<p>The accuracy of the water boiling test is as follows: All weights are +/- 0.01kg Temperatures are +/- 1 deg C Which correspond to the accuracy of the instruments used in the original stove efficiency test (POA 5336: Annex 5) The results meet 95/5 confidence precision</p>	Please provide the records of calibration for the instruments (weighing scale, Thermometer) used in the WBT tests.
CL#5.1	<p>Assessment:02 Dated 29 May 2013</p> <p>Please provide the records of calibration for the instruments (weighing scale, Thermometer) used in</p>		<p>As per the guidance from the UNFCCC (paragraph 17 (C) General Guidelines to SSC Methodologies)</p>	PJRCES has reviewed the PP response and supporting document regarding weighing scale and thermometer used



VERIFICATION CHECKLIST – VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
	the WBT tests.		<p><i>"Measuring equipment should be certified to national or IEC standards and calibrated according to the national standards and reference points or IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once in three years;"</i></p> <p>The Kenyan Bureau of Standards does not stipulate any requirement for calibration frequency of OIML (International Organisation of Legal Metrology) Class M3 weighing instruments (low accuracy)</p> <p>There is no IEC standard stipulated for calibration of weighing equipment of Class M3 (low accuracy) – other than 'calibration should be performed regularly'.</p> <p>As the scale and thermometer manufacturer has not stipulated a calibration interval, we will calibrate or replace (whichever is cheaper) all of our weighing scales and thermometers every three years.</p> <p>The start date of the POA baseline study was February 2010; we replaced all our original scales on 18/05/2011, which means we are due to replace</p>	<p>during WBT tests. It is found to be OK.</p> <p>This CL#5.1 is closed.</p>



VERIFICATION CHECKLIST - VVSv7.0

DRAFT REPORT CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS			SUMMARY OF PP RESPONSE	VERIFICATION TEAM ASSESSMENT
CAR/CL №	DESCRIPTION OF CAR/CL	REFERENCE		
			our scales again on 17/05/2014. Receipts for these scales replacements supplied. We did not use thermometers in the baseline study; hence our thermometers were purchased brand new. Receipts are dated 26/06/2012, which means we are due to replace these on 25/06/2015.	
	Assessment: 01 Date: 17 May 2013			
CL#6	Please provide the environment impact report as mentioned in CPA-DD (Section C.3) approved by Kenya's National Environment Management Authority for CPA01.	CPA-DD section C	EIA report supplied (annex 6)	PJRCES verification team has reviewed the EIA report which was prepared by Mr. Nicholas Ngece. It was found OK. This CL#6 closed.
	Assessment: 01 Date: 17 May 2013			
CL#7	Please provide the no objection certificate by The National Environment Management Authority (NEMA) that each SSC-CPA under the programme meets the environmental requirements of the Environment Management Coordination Act (EMCA) of 1999.	CPA-DD section C	EIA approval supplied (annex 10)	PJRCES has reviewed the No Objection Certificate by The National Environment Management Authority (NEMA) letter dated 5 July 2011 is valid for 2 year from date of issue. The current verification is till 20 March 2013 which well within the NOC range. It is found to be OK. This CL#7 is Closed.



VERIFICATION CHECKLIST – VVSv7.0

APPENDIX B – VERIFICATION TEAM DETAILS

TEAM MEMBER NAME	COMPETENCY /ROLE	EXPERIENCE
Ajay Verma	Lead Verifier & Sectoral expert	<p>He worked for 1.5 years in energy auditing wherein he was involved in energy audits for plant utilities, commercial buildings, manufacturing plants. During his tenure in industry, his technical responsibilities included involvement in base data collection, analysis and preparation of consolidated energy audit report with energy saving measures. He is a certified Energy Auditor by BEE (Bureau of Energy Efficiency) Government of India, a certified Indian Green Building Council Accredited Professional (IGBC AP) and trained as a Lead Auditor for EMS (ISO 14001). He has also trained on “Photovoltaic System Design, Operation, Maintenance and Repair of Solar PV Systems” conducted by Solar Energy Center, Ministry of New and Energy, government of India.</p> <p>His experience in CDM includes 2 years in CDM projects development consultancy and 3 years in validation and verification of projects in regulated as well as non-regulated market. He has handled various CDM projects in different areas like renewable energy, energy efficiency, waste heat recovery, fuel switch etc.</p> <p>His sufficient sectoral competence in renewable energy based energy generation, and energy efficiency are sufficiently demonstrated through his educational qualification, industry and CDM experience.</p>
Rohit Badaya	Lead Verifier and Team Leader	<p>Rohit holds specialization in Paper technology in the domain of Chemical Engineering, has more than 6 years of experience in the area of Climate Change both as a Validator and CDM Consultant.</p> <p>He is currently a Lead Verifier and Team Leader, handled various validation and verification projects both in India & abroad in different areas like renewable energy, energy efficiency, fuel switch, waste heat recovery and waste handling. Apart from CDM, he has also worked on validation and verification of Verified Carbon Standard and Gold Standard projects.</p> <p>Prior to Validation, he had worked as CDM consultant and provided CDM related technical and financial consulting to industries like dairy, distilleries and industries manufacturing tiles, textiles, plastics, paper, guar gum etc in the sectors of renewable energy, energy efficiency and waste handling. He has CDM documentation experience including preparation of project information note, project design development, host country approval and responding to project related technical and financial issues. He has also done an extensive research in CDM related areas of Indian paper industries.</p> <p>His competence in renewable energy based energy generation, energy efficiency and waste handling is sufficiently demonstrated through his education qualification and experience in CDM.</p>
Siddhartha Nauduri	Verifier and Team	Siddhartha Nauduri has completed his Masters Degree in Energy Engineering and Bachelors in



VERIFICATION CHECKLIST - VVSv7.0

	Member	<p>Chemical Engineering. He has been working for the past 6.5 years in Renewable Energy and Carbon Markets. After his Masters he worked with the Administrative Staff College of India on alternative fuels in the transport sector of India. He also worked on designing biogas power plant and energy audits. He later worked with Zenith Energy Services as CDM consultant working on different renewable energy, waste heat recovery, energy efficiency and waste handling and disposal projects, apart from conducting energy audits for different industrial sectors and buildings. He also worked as validation and verification team member with PJRCMD and SGS. He has been in the CDM field for nearly 6 years. He is also a Lead Auditor for EMS ISO 14001. He has been working in both regulatory and open markets. Based on his work experience he has competency to work on energy industries, energy efficiency and waste handling and disposal projects.</p>
Anjana Sharma	Independent Technical Reviewer	<p>Anjana Sharma holds a Bachelor in Chemical Engineering. She has a combined experience of 11 years. Prior to her entry into the CDM world, she worked for 3 years in Chlor-Alkali industry wherein she was involved mainly in the plant operations, energy conservation measures and QMS. During her stint in industry, her technical responsibilities included involvement in day-to-day plant operations, analysis of consumption of different inputs to the Chlor-Alkali process (primarily the raw material, power, fuels like FO/HSD for boilers etc) on daily basis and preparation of consolidated monthly report. Based on that, she, in consultation with Head of Works, would identify the potential areas of improvement and presenting the same to the management. Being the member of Technical Services Cell of the company, she was actively involved in market research for the energy efficient technologies for the Chlor-Alkali process. Apart from above technical part, she was also an internal auditor for ISO 9001. She has been trained as an internal auditor for QMS as well as Lead Auditor for QMS (ISO 9001) and EMS (ISO 14001).</p> <p>Her experience in CDM includes 6 years and 4 months (as on date) in validation and verification of projects in regulated as well as non-regulated market. Prior to joining PJRCMD, she worked as a CDM Validator and Technical Reviewer at DNV for 4 years. She has handled validation and verification of numerous CDM projects, both in India & abroad in different areas like renewable energy, energy efficiency, waste heat recovery, waste handling and disposal (especially landfill gas recovery and utilization, and waste water treatment), fuel switch etc.</p> <p>Her sufficient sectoral competence in renewable energy based energy generation, energy efficiency and waste handling and disposal is sufficiently demonstrated through her education qualification, industry experience and experience in CDM.</p>