



Verification Report For the Gold Standard Project Activity

Co2balance UK Ltd

“Aberdares Improved Cook Stoves” In Republic of Kenya

For

Gold Standard ID Number GS 883

Monitoring Period:
01st April 2013 to 31st March 2014¹

Report No: CCL255AICS20140224

Revision No. 05

Report Date: 27-01-2015,

Carbon Check (Pty) Ltd.
Block-A, Ground Floor
374 Rivonia Boulevard
Rivonia, Johannesburg
Republic of South Africa 2128

¹ Both days included

I. PROJECT DATA

Project title:	Aberdares Improved Cook Stoves		
Registration No. / Date:	GS 883 / 30-12-2011	Scale:	Small
Monitoring period:	01-04-2013 to 31-03-2014	Monitoring Period Number:	3 rd
Methodology:	Energy Efficiency – Domestic Methodology for improved cook-stoves and kitchen regimes V.02	Sectoral Scope / Technical Area:	1,3/1. 1, 3.1
Publication of MR:	Not Applicable. ²		
Final Monitoring Report:	Version 3 dated 08/09/2014		
Average emission reductions:	Estimated:	73,833 tCO ₂ e/yr	Verified: 24,442 tCO ₂ e/yr
GHG reducing measure/technology:	GHG reduction due to reduction of fuel-wood consumption (non-renewable biomass) through implementation of efficient cookstoves.		

Country	Project participants	Party considered a project participant	Contract party
Republic of Kenya	co2balance UK Ltd	No	☒

II. VERIFICATION TEAM (compliance of § 330 (b) of VVS)

Verification Team			Role									
Full name	Affiliation	Appointed for Sectoral Scopes (Technical Areas)	Team leader	Acting/trainee Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting/Trainee Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
Amit Anand	RSA	1.2, 3.1	X									
Barun Kumar	RSA	1.2, 3.1, 13.1		X		X						
Adam Simcock	RSA	-			X							
Pankaj Kumar (till 09/07/2014 ³)	India	1.1, 1.2, 3.1, 4.5, 13.1	X				X					
Anubhav Dimri	RSA	1.2, 3.1								X		
Ramchandra Nesari	India	1.1, 3.1, 4, 5.1									X	

III. VERIFICATION REPORT

Verification Phases and Status:

☒ Desk Review

☒ Follow up interviews, On Site Assessment

² There is no requirement for publication of MR on Gold Standard website by The Gold Standard Foundation.

³ Mr Pankaj Kumar was Team Leader until 09/07/2014 and from there he remain on the team as technical expert.

☒ Resolution of outstanding issues ☒ Corrective Actions / Clarifications Requested
☒ Full Approval and Submission for Issuance ☐ Rejected

Verification Report	Version	Date
	Version 01	25/04/2014
	Version 02	08/09/2014
	Version 03	13/10/2014
	Version 04	19/11/2014
	Version 05	27/01/2015
Final Approval Date	Approval	Distribution
Date: 2014-11-19	 By: Adam Simcock	☒ No distribution without permission from the Client or responsible organizational unit ☐ Limited Distribution ☐ Unrestricted distribution

Abbreviations

BAU	Business As Usual
BFT	Baseline Field Test
CCL	Carbon Check (Pty) Ltd.
CER	Certified Emission Reduction
CL	Clarification Request
CO	Carbon Monoxide
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DOE	Designated Operational Entities
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FT	Field Test
FVR	Final validation Report
GS	Gold Standard
GHG	Greenhouse gas (es)
ICS	Improved Cook Stove
IPCC	Intergovernmental Panel on Climate Change
KPT	Kitchen Performance Test
KS	Kitchen Survey
MKS	Monitoring Kitchen Survey
MP	Monitoring Plan
OSV	Onsight visit & Interviews
PM	Particulate Matters
TSPM	Total Suspended Particulate Matter
RSPM	Respirable Suspended Particulate Matter
UNFCCC	United Nations Framework Convention on Climate Change
US	Usage Survey
VVS	Validation and Verification Standard

Verification Opinion — summary {compliance of § 330 (a) of VVS}

Carbon Check (Pty) Ltd has performed 3rd periodic verification of the registered Gold Standard project activity “Aberdares Improved Cook Stoves” having GS registry number GS883 for the period 01/04/2013 to 31/03/2014. The verification team assigned by the DOE concludes that the VER/GS Project Activity as described in the register PDD/05/ GS Passport/15/ and monitoring report (version 3 dated 08/09/2014)/01/ meets all relevant requirements of the Gold Standard/B02/. The verification has been conducted in accordance with GS Version 2.1 requirements along with the UNFCCC VVS (version 07.0)

Verification methodology and process

The Verification team confirms the contractual agreement/14/ dated 24/02/2014 between the DOE, Carbon Check (Pty) Ltd and the Project Participant, co2 balance UK Ltd. The team assigned for this GS verification project meets all the requirements as per Carbon Check (Pty) Ltd internal procedures including the UNFCCC requirements for the team composition and competence. CCL has conducted a thorough contract review as per UNFCCC and Carbon Check procedures and requirements.

The verification has been performed as per the requirements described in the Gold Standard Requirements; Gold Standard Toolkit version 2.1 and VVS (version 07.0) and constitutes the review and completion of the following steps:

- Reviewing the registered PDD (version 10, dated 18/09/2012), including the monitoring plan and the corresponding validation report and the Gold Standard Passport, the Sustainability Matrix and monitoring data;
- Confirm the monitoring report/01/ has been made available to the Gold Standard Registry;
- Desk review of the MR, previous verification reports (if applicable), deviation request and requests for the revision of monitoring plan (if applicable) and other relevant documents including documents related to the projects activities in emission reductions. Review of the applied GS monitoring methodology “Energy Efficiency – Domestic Methodology for improved cook-stoves and kitchen regimes V.02/B03/
- Review of any CMP and EB decisions, clarifications and guidance /clarification of the Gold Standard Secretariat;
- Review of 2nd Monitoring Report & it's corresponding verification report
- On-site assessment and interview with the local stakeholders and households (end users) (from 12-05-2014 to 13-05-2014)
- Issuance of Draft Verification Report (DVR) dated 14-07-2014
- Resolution of CARs and CLs raised during verification process and MRs/01/ & ER Calculations sheets/02/
- Issuance of Final Verification Report

In Carbon Checks opinion, the project activity was correctly implemented according to applied monitoring methodology, monitoring plan and the registered PDD/05/. Through the review and on site visit, the verification team confirms that the project has resulted in the 24,442 tCO₂ emission reductions during the 3rd monitoring period. The GHG emission reductions and non-GHG parameters were correctly calculated /monitored on the basis of the approved monitoring methodology “Energy Efficiency – Domestic Methodology for improved cook-stoves and kitchen regimes V.02 and the monitoring plan contained in the register Project Design Document (version 10, dated 18/09/2012)/05/. Carbon Check as a DOE therefore issues a positive verification opinion expressed in the attached Certification statement, and certifies that the emission reductions from the project “Aberdares Improved Cook Stoves” for the monitoring period reduced the GHGs of 24,442 tonnes of CO₂ equivalent for the applied verification period i.e. 01/04/2013 to 31/03/2014 (including both days).



TABLE OF CONTENTS

1.	INTRODUCTION	7
1.1	Objective	7
1.2	Scope	7
1.3	Project Activity Description	8
2.	METHODOLOGY	9
2.1	Desk review	9
2.2	Background documents:	11
2.3	On-site visit and follow-up interviews with project stakeholders	11
2.4	Resolution of outstanding issues	16
2.5	Internal quality control	18
2.6	Verification Team ^{(compliance of § 330 (b) of VVS)}	18
3.	VERIFICATION FINDINGS ^{(COMPLIANCE OF § 330 (C) OF VVS)}	19
3.1	Project implementation	19
3.2	The actual operation of the CDM project activity	22
3.3	Compliance of the monitoring plan with the monitoring methodology including applicable tool(s)	22
3.4	Compliance of the Actual monitoring with monitoring plan in the PDD	24
3.5	Monitored parameters	26
3.6	Monitoring responsibility	40
3.7	Deviation from and/or Revision of the registered monitoring plan	41
3.8	Assessment of data and calculation of greenhouse gas emission reductions	41
3.9	Assessment of actual emission reductions with the estimated emission reductions in PDD	44
3.10	Compliance with the sustainability monitoring plan	45
3.11	Monitoring of Gold Standard Sustainability Indicators	45
3.12	Issues remaining from the previous verification period or during validation	48
3.13	Quality and Management System Assurance	48
	APPENDIX A	49
	APPENDIX B	50

1. Introduction

The co2balance UK Ltd has commissioned the Carbon Check (Pty) Ltd. to perform an independent verification of the GS Project Activity “Aberdares Improved Cook Stoves” (hereafter referred to as “project activity”). This report summarises the findings of the verification of the project, performed on the basis of Gold Standard requirements version 2.1 and toolkit and paragraph 62 of the CDM M & P, as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the CDM Executive Board and Gold Standard Secretariat. Verification is required for all registered GS project activities intending to confirm their achieved emission reductions and proceed with request for issuance of GS VERs. This report contains the findings and resolutions from the verification process and a statement for the certified emission reductions.

1.1 Objective

Verification is the periodic independent review and *ex post* determination of both quantitative and qualitative information by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered/validated GS project activity during a defined proposed monitoring period.

Certification is the written assurance by a DOE that, during a specific period in time, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the “Aberdares Improved Cook Stoves” for the period 01-04-2013 to 31-03-2014.

The purpose of verification is to review the monitoring results and to verify that the monitoring methodology was implemented according to the monitoring plan of the registered PDD and used to confirm the reductions in anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. Other non-GHG parameters shall also be assessed as per the requirement of GS. Verification of emission reductions for Gold Standard crediting is only for eligible greenhouse gases.

In particular, the monitoring plan, monitoring report and the project’s compliance with relevant GS/UNFCCC and host Party criteria are verified in order to confirm that the project has been implemented in accordance with the previously registered project design and conservative assumptions, as documented in-line with applied approved monitoring methodology.

1.2 Scope

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered PDD
- To verify the implemented monitoring plan with the registered PDD and applied approved baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan of the registered PDD.
- To evaluate the GHG emission reduction data/ and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data and other non-GHG parameters as per the requirement of GS is sufficiently supported by evidence(s).

Carbon Check scope of verification as a third party verifier is to verify project emission reductions and sustainable development impacts against the requirements set out by the



Gold Standard. The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The verification comprises a review of the monitoring report over the monitoring period from 01-04-2013 to 31-03-2014 and based on the registered PDD in part of the monitoring parameters and monitoring plan, emission reduction calculation spread-sheet/02/, monitoring methodology/B03/ provided by project participant.

On-site visit and stakeholders and households interviews were also performed as part of the verification process.

1.3 Project Activity Description

The project involves the distribution of improved (i.e. energy efficient) cook stoves in the villages of Lari and Gatamaiyu Divisions, in Central Province in Kenya. During the site visit, it was assessed that the cook stoves were distributed in those villages that were included in the registered PDD. This project not only reduces the GHG emissions due to usage of reduced fire wood but also it helps curb the ongoing deforestation. Moreover, it also contributes to the health of the household's inhabitants by reducing indoor smoke levels. The studies present that approximately 2 billion people rely on biomass for cooking and heating. Another study by the WHO shows that 4-5 % the global deaths occur due to exposure to smoke particulates/16/.

These cook stoves are called as Carbon Zero Kenya (CZK) cook stoves. This is constructed in the rocket style with an inner ceramic liner. Clay and mortar are used to construct the CZK cook stoves. Due to its improved and efficient design, it emits less smoke and always produces high thermal energy and maintains the heat. Thus, this efficient cook stove also consumes less firewood for cooking or to produce the thermal energy. This project is implemented by the Project Participant co2balance UK Ltd. in 23 villages, 2 divisions, Lari District located in the Central Province of Kenya.

As per the registered PDD the project includes the installation of 23,033 improved cook stoves at zero cost to the user. During the course of verification, it was noticed that 149 pilot stoves were distributed in the project region Aberdares in June 2010. Subsequently, PP conducted a local stakeholders' consultation and the baseline study from June to December 2010 to apply the project for Gold Standard. Hence, the distribution of stoves was halted in June 2010 and recommenced in December 2010. It continued for six months till June 2011 and up until then PP has installed/constructed 9,311 cook stoves. However, as per the GS requirements, a PP can only claim emission reductions for the stoves that have received the carbon Trading forms (CTF) from the households. Accordingly, 7,946 cook stoves are credited in the current monitoring period and these have been considered for the calculation of emission reductions. PP has also confirmed that no new stoves were installed over the current monitoring period. The CCL verification team has checked the total distribution records/06/ of the current and previous monitoring period and confirms the considered number of CTFs is correct. The above values were confirmed through stove distribution database/06/.

The value of fNRB taken from third party assessment report conducted by C4Ecosolutions. The value of NRB will be monitored biennially and is therefore also included under the monitored parameters. The original NRB study was reviewed in August 2013 by co2balance UK Ltd in correspondence with the PDD and in time for verification, which is in line with registered PDD/05/. The fraction remains at 0.95.

These Improved biomass cook stoves are built to reduce consumption of wood and therefore bring reduction in related indoor air pollutants from incomplete combustion of fuel wood (CO and PM). This project reduces greenhouse gas emissions by disseminating efficient biomass cook-stoves that have been proven through testing/10/ and also verified during onsite observation and interview with house hold users to be more efficient than traditional three stones & traditional stoves models in the host country of Kenya.

Using CZK type of ICS provides the following benefits:

- Reduce unsustainable wood harvest and hence reduce the rate of deforestation
- Reduces fuel wood cost for households and communities and save fuel/fodder collection time.
- Contributes to the preservation of wood resources so as to avoid inter-communal conflict over resources.
- Provides employment with regards to local monitoring survey, distribution of cook-stoves etc.
- Provides health benefits e.g. coughing and irritation of eyes as well time saving during the cooking process.

Based on above, the verification team confirm that the project is in line with the plans contained in the registered PDD.

2. Methodology

The verification consists of the following four phases:

1. Completeness check of the Emission Reductions Monitoring report and Gold Standard Sustainability Monitoring Report, and submission to the Gold Stand Registry and Project Administration System;
2. Review of project documentation (monitoring plan, monitoring report, monitoring methodology, project design document, applicable tools in particular attention to the frequency of measurements, quality of metering equipment's including calibration requirements, QA/QC procedures and other relevant documents and regulations);
3. On-site visit (including follow-up interviews with project stakeholders,). The on-site assignment includes the following;
 - An assessment of implementation and operation of project activity with respect to registered PDD;
 - Review of information flows for generating, aggregating and reporting the monitoring parameters;
 - Interview with relevant personnel to determine whether the operational and data collection procedures are implemented and in accordance with monitoring plan of the PDD;
 - Cross check of information and data provided in the monitoring report with plant logbooks, inventories, purchase records or similar data sources;
 - Check of monitoring equipment's, calibration frequency and monitoring practice in-line with methodology and PDD;
 - Review of assumptions made in calculating the emission reduction;
 - Implementation of QA/QC procedure in-line with the PDD and methodology requirement.
 - Issuance of Draft Verification Report (DVR)

The following sections outline each step in more detail.

Duration of Verification:

- Signing of Letter of Engagement: 24-02-2014/14/
- On Site Visit: 12-05-2014 to 13-05-2014
- Reporting/Calculations/Technical Review and QA/QC

2.1 Desk review

The following table outlines the documentation reviewed during the verification:

Reference	Document
-----------	----------

Reference	Document
/01/	Monitoring Report final version 0 dated 08/09/2014
/02/	Emission reduction spread sheet corresponding to /01/
/03/	co2balance UK Ltd.: Baseline Report of Aberdares dated 2012-09-18.
/04/	C4 Ecosolutions.: NRB Study Report compiled by Anthony Mills (PhD) and Diane Southey (MSc), dated June 2012
/05/	Registered GS-VER-PDD, Aberdares Improved Cook Stoves (version 10, dated 18/09/2012) and it's corresponding validation report dated 24/04/2012
/06/	Total Distribution Records Excel sheet /Sample of Carbon Transfer Forms file records.
/07/	Sample of answered questionnaires for the MKS, KS and Usage surveys Conducted during the 3rd monitoring period.
/08/	Monitoring Report for 2 nd Verification (08/07/2013 to and it's Corresponding verification report issued by Carbon Check dated 11/07/2013.
/09/	Training Agenda and Attendance Records for Carbon Zero Kenya dated 12-13 th February 2014
/10/	Constructing the Stove – Builders Manual co2balance Kenya 04/12/2012
/11/	Monitoring Protocol co2balance monitoring and data collection procedure.
/12/	Standard Operating Procedures
/13/	Aberdares MKS Results Master Verification 3.xle
/14/	Letter of engagement (contract) signed between Co2balance UK Ltd. and Carbon Check Pty Ltd. for the 3 rd verification of GS project “Aberdares Improved Cook Stoves” dated 24/02/2014
/15/	a) GS Passport b) Verification Report (2), version 08 dated 11/07/2013 by Germanischer Lloyd Certification GmbH
/16/	The health effects of indoor air pollution exposure in developing countries”, WHO, 2002 : http://whqlibdoc.who.int/hq/2002/WHO_SDE_OEH_02.05.pdf
/17/	Sample copies of “transfer of Carbon Rights”
/18/	Digital scales Specifications

Reference	Document
/19/	Incorporation certificate of company i.e. Co2balance UK Ltd.

During the desk review, Carbon Check applied the standard auditing techniques to assess the quality of information provided.

2.2 Background documents:

Ref no.	Reference Document
/B01/	1. Validation and Verification Standard version 07 2. Project Standard version 07
/B02/	Gold Standard specific rule/guidelines/standard: 1. Gold Standard tool kit (GSv2.1_Toolkit) 2. GSv2.1-Requirements 3. GS-annexes to toolkit
/B03/	Applied baseline and monitoring Gold Standard Voluntary Methodology, "Domestic Methodology for improved cook-stoves and kitchen regimes" version 02.
/B04/	1. Guideline: Completing the monitoring form, version 03.1 2. Template of MR available on UNFCCC website
/B06/	1) 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2: http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html 2) The Application of Global Warming Potentials for "Gold standard Project Activities (http://www.goldstandard.org/wp-content/uploads/2011/09/Global-Warming-Potentials-for-Gold-Standard-Project-Activities-2013.pdf)
/B07/	Standard for Sampling & Survey of CDM Projects including it's amendments up to EB 80 Annex-07 dated 18 th July 2014

2.3 On-site visit and follow-up interviews with project stakeholders

Members of the verification team from 12-05-2014 to 13-05-2014 performed an OSV. During the course of OSV following activities were performed:

- An assessment of the implementation and operation of the registered project activity as per the registered/validated PDD;
- A review of information flows for generating, aggregating and reporting the GHGs monitoring data and parameters;
- Interviews with relevant personnel including household end users to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the registered PDD;
- A cross check between information provided in the monitoring report and data from other sources such as , sales record, work sheet, usage survey, Monitoring kitchen survey and Kitchen Performance Test (KPTs) or similar data sources etc;
- A review of calculations and assumptions made in determining the GHG data and emission reductions;
- An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
- Verification of the monitoring of sustainable development indicators as stipulated in the registered Passport/15/.



The project representatives and stakeholders interviewed:

	Name	Organization	Type	Topic
/II/	Lucas Emmerson	Co2balance	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Project Implementation Plan, Stoves Distribution Plan, Sales Records, Replacement of old/damaged stoves, Financial benefits to the end user of stoves
/III/	Moses Maina	Co2balance	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Project Implementation Plan, Stoves Distribution Plan, Sales Records, Replacement of old/damaged stoves, Financial benefits to the end user of stoves
/III/	Virginia Njeri	Co2balance	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	MR, GHG and non-GHG parameters, project implementation/operation, compliance of monitoring plan with monitoring meth, registered PDD, ER calculation.
/IV/	Michael Njihia	Co2balance	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Project Implementation Plan, Stoves Distribution Plan, Sales Records, Replacement of old/damaged stoves, Financial benefits to the end user of stoves
/V/	Paw Njamba	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/VI/	Lucy Mwangi	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/VII/	Amina Tume	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/VIII/	Harreh Wambui	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/IX/	Esther Gathoni	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/X/	Jonathon muigai	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XI/	Mangnet Wanjiru	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview

/XII/	Peter Githaiga	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XIII/	Beth Nyokari	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XIV/	Luccy Ngina	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XV/	Mary Wairima	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XVI/	Mary wangeri	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XVII/	Samuel Gachibi	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XVIII/	Esther Wanjiku	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XIX/	Josphine Wambui	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XX/	Harrah Wambui	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXI/	Mary Mukuhi	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXII/	Esther Wambui	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview

/XXIII/	Nwangi Njatha	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXIV/	Teresia Kagoi	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXV/	James Kariuki	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXVI/	James Kinyanjui	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXVII/	Grace Nyambura	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview
/XXVIII/	Francis Kuria	End user	☐ On-site ☒ Face to Face ☐ Telephone ☐ Email ☐ Skype	Onsite inspection and Interview

Standard auditing techniques has been applied by CCL to assess and verify the quality of information provided during the course of verification.

In line with the requirements of Annex 7 of EB 80/B07/, CCL has verified a total of 25 samples during the onsite visit as listed above (/V/ to /XXVIII/ above). Carbon Check selected acceptable quality level (AQL) at 0.5% and unacceptable quality level (UQL) at 15% based on 5% producer's risk and 10% consumer risk In line with the guidelines provided in paragraph 29 of annex 6 of EB 74^{/B07/}. The preset acceptance number at 0.5% AQL was determined as 1(Cp table of paragraph 29 annex 6, EB 74)^{/B07/}.

As per the applied methodology, the sample size for the MKS survey should not be less than 25. However, PP has chosen a sample size of 45 which is better than the minimum sample (25) stipulated by the applied Gold Standard methodology "Methodology for Improved Cook stoves and Kitchen Regimes" version 02. /B03/. The results obtained from the monitoring kitchen survey are crosschecked with the MKS survey results/13/ documents made available during the site visit. The CCL verification team has interviewed the stove users to extract the information related to the demography, no. of family members, fuel use, cooking habits and the sustainability aspects as well. This information was found consistent with the provided MKS survey results.

After the site visit interviews with the selected households the verification team confirmed that the provided data is fully consistent with the data obtained from the households. This, all data obtained through MKS survey is assessed as credible and deemed verifiable for the current monitoring period.

All these households were physically met and interviewed by the verification team during the onsite verification to assess the veracity of the provided MKS and usage survey details for the current monitoring period. CCL's onsite visit of the sampled 25 households revealed no discrepancy/ies (DOE's sample that do not agree with the PP's sample records), which is in line with predefined acceptance number of 1 as per Annex 07 of EB 80 (version 04.1)^{B07/}.

Hence, CCL confirms that PP's survey/sampling records to be acceptable and assessment of acceptance of PP's sampling has been conducted in line with the requirements of the annex 7 of EB 80/B07/.

Through the above-mentioned activities the verification team confirmed the following Gold Standard project aspects in relation to the project activity:

- The implementation and operation of the project activity is as described in the monitoring plan in the registered PDD.
- The operational and data collection procedures are implemented as per the monitoring plan in the PDD
- The information flow for generating, grouping and reporting of the monitored parameters
- Procedures to avoid double counting are in place.
- Each ICS is having a unique identity number displayed on the stove & DOE could confirm the same on all the 40 samples during OSV

2.4 Resolution of outstanding issues

The objective of this phase of the verification is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which have to be clarified/corrective action done prior to final DOE's conclusions on the project implementation, monitoring practices and achieved emission reductions. In order to ensure transparency a verification protocol is completed for the project activity. The protocol shows in transparent manner criteria (requirements), means of verification and resulting statements on verification of actual project activity against identified criteria.

The verification protocol serves the following purposes:

- It organises in a table form, details and clarifies the requirements, GS project is expected to meet GS/CDM requirements;
- It ensures a transparent verification process where the DOE will document how a particular requirement has been verified and the result of the verification.
- It ensures that the issues are accurately identified, formulated, discussed and concluded in the validation report.
- It ensures the determination of achieving credible emission reductions from the project activity.

The verification protocol consists of two tables. Table 1 reflects the verification requirements and reference to the materials used to verify the project activity against those requirements, as well as means of verification, reference to Table 2 (i.e. tables of findings) and preliminary and final opinion of the DOE on every particular requirement listed in table 1.

Verification Protocol Table 1: Requirement checklist				
Checklist question	Verification Team Comment/MoV	Reference	Findings comments references, data source / Draft Conclusion	Final Conclusion
The checklist items in Table 1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.	The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the Verification team and how the assessment was carried out. The reporting requirements of the VVS and Project Standard shall be covered in this section.	Gives reference to the information source on which the assessment is based on	Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR is raised (see below). The assessment refers to the draft verification stage.	In case a corrective action or a clarification request the final assessment at the final verification stage is given.

The findings of verification process are summarized in the tables below.

Finding (reference section of table 1)	xx		
Classification	☐ CAR	☐ CL	☐ FAR
Description of finding (DOE)			
Corrective Action or clarification #1	(PP shall write a detailed and clear corrective action or further information for clarification as per finding)		
DOE Assessment #1	The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.		
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☐ The finding is closed		

In Table 2 FAR, shall reflect the forward actions initiated by the verification team if the monitoring and reporting require attention and/or adjustment for the next verification period. The completed verification protocol for this project is enclosed in Appendix A to this report.

Findings during the verification can be interpreted as a non-compliance with CDM criteria or a risk to the compliance.

Corrective action requests (CARs) are raised, in case:

- (a) Non-conformities 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;
- (b) 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, which will impair the estimate of emission reductions;

- (d) Issues identified in a FAR during validation/previous verification(s) that are not been resolved by the project participant(s) to be verified during current verification.

Requests for clarification (CLs) are 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 during verification to highlight issues related to project implementation/monitoring that require review during the subsequent verification of the project activity. FARs shall not relate to the CDM requirements for issuance.

2.5 Internal quality control

The final verification report has been technically reviewed before being submitted to the project participant and GS registry. The technical review performed by a technical reviewer qualified in accordance with CCL's qualification scheme for CDM/GS validation and verification.

2.6 Verification Team (compliance of § 330 (b) of VVS)

Carbon Check appointed a competent team as per the Accreditation Standard and Carbon Check internal procedures, the team is outlined below:

Verification Team		Type of Involvement						
Full name	Appointed for Sectoral Scopes (Technical Areas)	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Technical Reviewer
Pankaj Kumar (till 09/07/2014)	1.1, 1.2, 3.1, 4.5, 13.1	X	X	X		X		
Amit Anand	1.2, 3.1	X	X				X	
Barun Kumar	1.2, 3.1, 13.1		X		X			
Adam Simcock	--						X	
Anubhav Dimri	1.2, 3.1, 13.1							X
Ramchandra Nesari	1.1, 3.1, 4, 5.1					X		

Background information for verifiers:

Amit Anand: Qualified lead assessor and internal technical reviewer for offset projects validations and verifications under CDM, VCS and Gold Standard (GS) and actively been involved in the validation and verification or internal technical review of more than 20 offset projects. He is qualified as technical expert for TA 1.2 and 13.1 under CDM Sectoral Scope categorisation. He holds a Masters in Environment Management from Forest Research Institute, Dehradun and B.Sc. Environmental Sciences from Ramjas College, in University of Delhi. He also has attended training in ISO 14001:2004 - Lead Auditor Training Course and for Social Carbon Standard Training. He was involved in the following Projects submitted to UNFCCC for Request for Registration and issuance: UNFCCC Project Reference Numbers: 7484, 7820, 7821, 7849, 7881, 7889, 8350, 9489, 0925, 6864, 0177 - . He was also involved as validation and verification assessor in the following Gold Standard Projects: GS 1078, GS 976, GS 850, and GS 916 PoA (GS 1231 (VPA 01) GS 1029 (VPA 02), GS 1030 (VPA 03), GS 1031 (VPA 04)). He was also involved on the following GS project as consultant:

- Biogas based power project in Punjab (ID: 103000000002014)
- Biomass based power project in Punjab (ID: 103000000002243)
- Biomass based power project in Punjab (Birpind & Manuke Gill) (ID: 103000000002076)
- Biomass based power project in Punjab (Ramiana) (ID: 103000000002048)

- Biomass based power project in Punjab (Talwandi Rai) (ID: 103000000002047)
- Grid connected biogas based power project in Punjab (ID: 103000000002146)

Barun Kumar: Is an appointed technical expert in technical area 1.2, 3.1 and 13.1. He holds an M.Sc. Ecology & Environmental Sciences, Pondicherry Central University, Puducherry and B. Sc. Environment & Water Management, A.N. College, Patna Magadh University. He has been involved in the following CDM projects that have been submitted to UNFCCC for Request for Registration (UNFCCC Reference Numbers: 0795, 0925, 6181, 6924, 7492, 7531, 7535, 7536, 7553, 7608, 7607, 7638, 7781, 7816, 7841, 7887, 0795, 4728, 9296, 9310) GS Reference number: (GS 1078, GS 850, GS 976 and GS 824). He has attended Social Carbon Training and in house verification course as well as Gold Standard Webinars.

Adam Simcock: is local host country expert for this project. He has experience in clean and renewable energy sector particularly in enterprise-based energy access project development, research, baseline studies and project management support and facilitation of organizational and business linkages and networks within the renewable/alternative energy sector.

3. Verification Findings (compliance of § 330 (C) of VVS)

The findings of the verification are described in the following sections. The verification criteria (requirements), the means of verification and the results of verification are documented in detail in the verification protocol in Appendix A.

3.1 Project implementation

The project has disseminated 7,946 CZK wood stoves during the monitoring period which was confirmed through stove distribution database/06/

Project Participants:	Co2balance UK Ltd
Title of project activity:	Aberdares Improved Cook Stoves
UNFCCC/GS registration No:	GS 883
Applied Baseline and monitoring methodology:	Gold Standard Voluntary Methodology "Domestic Methodology for improved cook-stoves and kitchen regimes" V.02.
Project Scale:	Small Scale
Location of the project activity:	Kenya
Project's crediting period:	01/12/2010 to 31/11/2017
Reported monitoring Period verified in this verification:	01-04-2013 to 31-03-2014

As part of the site visit, the verification team was able to confirm that the project implementation is in accordance with the project description contained in the register GS PDD/05/ (Version 9, dated 24/04/2012. The verification took cognizance of § 244, 245 & 248 of CDM Project Standard (version 07.0) and § 270 (a) and § 271 of VVS (version 07.0)/B01/.

Project physical features (technology, project equipment, monitoring and metering equipment)	The project involves the distribution of improved (i.e. energy efficient) cook stoves in the villages of Lari and Gatamaiyu Divisions, in Central Province in Kenya. During the 3rd monitoring period (01-04-2013 to 31-03-2014), project activity, "Aberdares Improved Cook Stoves" has disseminated 9311 cook stoves and thus replaced conventional three stones stoves in Central Province in Kenya. It has achieved an estimated GHG offset of 24,442 tCO₂e. All stoves were distributed during the years 2010-11 and it was confirmed with sales records/06/. The technical designs of ICS were reviewed and also confirmed during OSV. The ICS installed
---	--

	in this project is of a fixed construction of clay bricks and mortar, using a 'rocket' style design. These cook stoves are called as Carbon Zero Kenya (CZK) cook stoves. This is constructed in the rocket style with an inner ceramic liner. Clay and mortar are used to construct the CZK cook stoves. Due to its improved and efficient design, it emits less smoke and always produces high thermal energy and maintains the heat. Thus, this efficient cook stove also consumes less firewood for cooking or to produce the thermal energy. Despite the combustion gases remaining in the house, the improved combustion efficiencies mean that smoke levels are drastically reduced. The value of is fNRB taken from third party assessment report conducted by C4Ecosolutions/04/. The value of NRB will be monitored biennially and is therefore also included under the monitored parameters. The original NRB study was reviewed in August 2013 by co2balance UK Ltd in correspondence with the PDD and in time for verification, which is in line with registered PDD/05/. The fraction remains at 0.95. Apart from reduction in greenhouse gases, the project offering co-benefit to user to relief from high fuel cost, save time for fuel collection and/or improved health due to less indoor pollution during the cooking process. During on site visit, verification team checked the design and technology/11/ of stoves of different users, which are in line with the description provided in register PDD/06/ and technical drawing/10/ provided by the PP. There is no change observed from the registered monitoring plan of the Register GS PDD/05/.
Any Project Design Change been sought and approved by EB for the project?	☐ Yes ☒ No NA

Projected activity is implemented in line with the registered PDD i.e. dissemination of efficient cook stoves in the host country of Kenya to the households previously using the conventional three stones stoves. Currently 7,946 stoves are in use during the proposed monitoring period. The total number of cook-stoves that are in use during monitoring period is verified from stoves sale database/06/ and found to be correct.

There are no new stoves distributed under this project during the current monitoring period. All the stoves were distributed during 2010-2011/06/ and the same were found to be under use in household. During the OSV, DOE could confirm that all the stoves were in good conditions and adequately maintained by the households.

Apart from reduction in greenhouse gases by the dissemination of fuel efficient wood stoves, the project offering co-benefit to user to relief from high fuel cost, save time for fuel collection and improved health due to less indoor pollution during the cooking process.

During on site visit, verification team checked the design and technology of stoves of different users, which are in line with the description provided in registered PDD/05/ and technical drawing/10/ provided by the PP.

Monitoring procedure of GHG data is found sufficient and in accordance with the procedures stipulated under the registered monitoring plan.

The verified timeline of the project's implementation is as follow:

Milestone of the project activity	Timeline	Assessment by the verification team
Starting date of operation: (Note: Project implementation i.e. usage of the disseminated efficient cook stoves)	July 2010	The start date of project is 01-12-2010, as cross-checked with PDD/05/ (version 10, dated 18/09/2012). However the Projects only included stoves with the built date starting from 09-07-10 as verified through stove distribution record/06/.
Registration of the project activity	30-12-2011	Verification team verified the registration of the project activity from the GS registry and found appropriate. The same can be accessed from the link provided below: http://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002046
Crediting period		
1st monitoring Period	01-04-2012-31-03-2013	http://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002046
2nd monitoring period	01-04-2012 to 31-03-2013	http://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002046
3rd Monitoring Period (Current)	01-04-2013 to 31-03-2014	Registered PDD/05/, Stove distribution records/06/ were checked, which was further substantiated during onsite visit and interviews with local stakeholders and end users of the project stoves (households)

Improved stoves were installed during the period 2010 to 2011 in the he project activity was implemented and as described in the registered PDD/05/.

On the basis of site visit, interview and the reviewed project documentation along with documentary evidences, it can be confirmed that the project implementation is in accordance with realized technology. The project has been implemented and operated as described in the approved revised PDD/05/ with GS secretariat. The monitoring and sustainable development indicators parameters are also monitored as per the approved revised PDD/05/ and GS guideline/B02/ and found to appropriate.

Verification Team summarizes *major* changes between initial/webhosted Monitoring Report and final version of Monitoring Report for submission as follows:

Subject	Initial/webhosted Monitoring Report	Final/verified Monitoring Report	Change(s)
Project title /	Aberdares Improved Cook Stoves	Aberdares Improved Cook Stoves	No change
Project Participants involved	Co2balance UK Ltd.	Co2balance UK Ltd.	No change
Project location	Kenya	Kenya	No change
CER calculations (amount of emission)	24,442tCO ₂ e/year	24,442tCO ₂ e/year	No change

reduction)			
Monitoring period (dates and period)	01-04-2013 to 31-03-2014 Monitoring Period-3	01-04-2013 to 31-03-2014 Monitoring period-3	No change
Crediting period (type / start date)	01/12/2010 to 31/11/2017 7 Years Renewable	01/12/2010 to 31/11/2017 7 Years Renewable	No change
Any other change	NA	NA	NA

The verification team has also assessed the monitoring and impact on the sustainable development indicators by the project implementation and found to be appropriate as per the approved PDD/05/

Based on above, verification team concludes, that, the monitoring period is reasonable and the operation of the project activity is in accordance with the approved PDD/05/. The verification took cognizance of § 245, 246 and 247 of CDM Project Standard (version 07.0) and § 262 b (i), 270 (a), 271 (a), (b) and 273 (b) and (c) of VVS (version 07.0).

3.2 The actual operation of the CDM project activity

Projected activity is implemented in line with the approved PDD i.e. dissemination of efficient cook stoves in the host country of Kenya to the households previously using the conventional three stones stoves. Currently 7,946 stoves are in use during the proposed monitoring period. The total number of cook-stoves that are in use during monitoring period is verified from stoves sale database/06/ and found to be correct.

There are no new stoves distributed under this project during the current monitoring period. All the stoves were distributed during 2010-2011/06/ and the same were found to be under use in household. During the OSV, DOE could confirm that all the stoves were in good conditions and adequately maintained by the households

Apart from reduction in greenhouse gases by the dissemination of fuel efficient wood stoves, the project offering co-benefit to user to relief from high fuel cost, save time for fuel collection and improved health due to less indoor pollution during the cooking process.

In summary, the monitoring period is reasonable and the operation of the project activity is in accordance with the registered PDD. The verification took cognizance of § 245, 246 and 247 of CDM Project Standard (version 07.0) and § 262 b (i), 270 (a), 271 (a), (b) and 273 (b) and (c) of VVS (version 07.0).

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

Any Revision in Monitoring plan is sought and approved by EB for the project?	☐ Yes ☒ No	NA
--	--	----

The verification team determined against all the information provided in MR, whether in-line with the applied monitoring methodology.

Verification Requirements	Criteria fulfilled	Assessment by the verification team
Any Deviation been sought and approved by EB for the project.	☐ Yes ☒ No	No deviation from methodology is found.

Verification Requirements	Criteria fulfilled	Assessment by the verification team
Is complete set of data for the specified monitoring period available	☒ Yes ☐ No	Complete set of data for the specified monitoring period i.e. 01/04/2013 to 31/03/2014 was provided by the PP, which was verified on sample basis by the verification team and found to be appropriate.
Is the required information provided in the monitoring report been cross-checked with other sources (ex – plant logbooks, inventories, purchase records, laboratory analysis)	☒ Yes ☐ No	Verification team has verified the data submitted by PP during onsite inspection and document review. 25 random selected samples of cook stoves (end users) were checked and all the relevant information was verified, through interview of the households. Sales record/06/ of all the ICS distributed under this project is maintained. It contains all the required information, e.g. serial number, date of sale, name of the end users etc. were verified to be appropriate. The main parameters, on the basis of which, ERs are accrued are as under: a) Total number of the stoves currently in use determined through user survey b) KPT c) Emission factor (verified from the IPCC report) DOE confirms that ERs calculated during this monitoring period are verified to be accurate by the verification team. Assessment of sampling /survey done by PP has been discussed in sec. 2.3 above.
Is the calculation of baseline emissions and project activity emissions and leakage been in accordance with the formulae and methods described in monitoring plan and the applied methodology?	☒ Yes ☐ No	The formulae and methods used in calculation of emission reduction are consistent with the approved PDD/05/ and the applied GS methodology/B03/.
Are all assumptions used for emission calculation have been justified	☒ Yes ☐ No	All the assumptions used for emission calculation were justified in the MR/01/ and r approved PDD/05/.
Is appropriate emission factors, IPCC default values and other reference values have been correctly applied	☒ Yes ☐ No	Default values taken in the calculation of ERs are cross-verified from the registered PDD/05/ and the IPCC default values and found to be appropriate.
Does the monitoring methodology provides any provision of verification for parameters other than monitoring of GHG data and shall be specific to the applicability criteria of applied methodology.	☐ Yes ☒ No	NA

Based on above, the verification team confirms that the monitoring plan contained in the approved revised PDD/05/ (version 10, dated 18/09/2012) is appropriately followed in the monitoring report by the project activity and also in accordance with the applied approved monitoring methodology, i.e. "Domestic Methodology for improved cook-stoves and kitchen regimes" (version 02)/B03/.

The monitoring plan along with sampling & survey of the cook stoves for baseline as well as the project case is described in the registered PDD/05/. DOE has reviewed the baseline survey/03/ baseline KPT was conducted by co2balance UK Ltd field staff and verified by Germanischer Lloyd during second verification. PP has submitted the reports on Kitchen performance Test/13/ and Kitchen Survey/13/ carried out for the 3rd Monitoring period & DOE has cross checked these information and survey method during onsite visit.

During the verification all relevant monitoring parameters (as listed in the registered PDD/05/) have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures.

The verification took cognizance of § 246 of CDM Project Standard (version 07.0) and § 274 to 277 and 270 (d) 282, 288, and 289 of VVS (version 07.0).

3.4 Compliance of the Actual monitoring with monitoring plan in the PDD

Any Revision in Monitoring plan is sought and approved by EB for the project?	☐ Yes ☒ No	There is no change in monitoring plan mentioned in PDD (version 10, dated 18/09/2012) during the current monitoring period (01-04-2013 to 31-03-2014).
Does the monitoring report provide line diagram showing all relevant monitoring points?	☐ Yes ☒ No	Line diagram for monitoring point is not applicable as the project monitoring is based on the sales data of cookstoves and third party survey report. There is no monitoring equipment applied as per the registered PDD and applied methodology.

The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD/05/ (version 10, dated 18/09/2012) and applied approved GS methodology/B03/.

During the course of verification, all relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement / determination method, and applied QA/QC procedures. According to the methodology, a Total Sales Record, Detailed Customer Database, and Project Database are maintained.

KPTs, Usage surveys and Kitchen Monitoring survey are conducted for following purposes:

- a) To measure/estimate parameter values through the method of survey
- b) To review and revise the cluster lists held in the Project Database;

Emission reduction calculations^{/02/} are carried out on the basis of the survey/13/ and KPT. Randomly selected samples from total population of 7,946 stoves formed the basis of monitoring.

The verification team reviewed the monitoring plan in the registered PDD/05/ and compared it against the requirements of the applied methodology/B03/ and confirms that appropriate provisions are included for the monitoring and reporting procedures, data management, and QA/QC procedures, including maintaining the detailed customer database and project database and found in line with the §274 of the VVS (version 07.0)/B01/.

The Monitoring sampling plan, implemented by the PP is in accordance with the applied approved monitoring methodology/B03/ and registered PDD/05/. The Kenyan team of Co2balance operates under the name of Carbon Zero Kenya (CZK) and is owned and run by Co2balance. CZK has appropriately performed cluster-sampling in line with the applied methodology and best suited for this type of project.

CCL confirms that the monitoring plan has been properly implemented by the PP in accordance with the registered PDD/05/and applied approved GS methodology/B03/. Following are the assessment points as follows:

Usage & Monitoring Kitchen Surveys:

As per the applied methodology/B03/, the MKS survey is conducted on a quarterly basis. Thus MKS 09, 10, and 11 were conducted in the current monitoring period in May 2013, September 2013 and January 2014 /13/. The survey conducted by PP, using sampling approach meets the criteria specified in methodology “Domestic Methodology for improved cook-stoves and kitchen regimes” (version 02)/B03/. Each MKS contains 70 questions to assess the demographics, seasonality, fuel use and cooking habits and sustainability monitoring parameters. As per the applied methodology, the sample size for the MKS survey should not be less than 25. However, PP has chosen a sample size of 45 which is better than the minimum sample (25) stipulated by the applied Gold Standard methodology “Methodology for Improved Cook-stoves and Kitchen Regimes“/B03/.

Verification team assessed the monitoring and usage survey report/13/ read with applied methodology/B03/ by Co2balance UK which was found to be in line with the onsite visit observation after interview with the end users (HHs) and also the interview with the PP.

Methodology and procedure followed to calculate the usage rate is assessed to be appropriate by the verification team as the number of sample taken were randomly selected from the project regions of the host country of Kenya where CZK stoves were distributed at the time of survey.

Kitchen Performance Test:

Kitchen performance test (KPT) /13/ is to determine the effect of improved cook stoves on fuel consumption in households along with other socio economic impact such as time of fuel collection, time for cooking and money savings due to reduced fuel consumption along with the health benefits etc. The test was performed by the PP (Co2balance UK Ltd & its Kenyan team).

As per the registered monitoring plan, the Kitchen performance tests were conducted biennially. This was conducted in August 2012.

As per the applied methodology 20-60 households are sufficient to assess the variation in the cooking patterns of the baseline and project households/13/. Further, it was observed that the KPT test was conducted in October 2010 under the supervision of third party HED consulting. It did not meet the required confidence interval due to the taken sample size of 45 households. PP has conducted the tests again by employing their staff upon receiving the permission from GS with increased sample size of 90 households in August 2012/13/. This data was furnished to the verification team and test result sheets were crosschecked with the test report documents available at their office in Nairobi. Thus, it is also assessed that data presented in the emission reduction sheet/02/ is reliable and credible.

All the work sheet/02/ where values are used for emission reduction calculation along with sustainable development indicators were verified to be in accordance with the onsite observation and interview with the HHs and PP.

Leakage Assessment:



The frequency of leakage assessment is biennial as per the monitoring plan. PP has installed only 9,311/06/ cook stoves till June 2011. Since then no cook stoves are installed to date. Further, in the current monitoring period there are no new stoves installed. Hence leakage is considered zero and it is consistent with the estimation provided in the registered PDD/05/.

All end users receive a copy of "transfer of Carbon rites/17/ upon the purchase of their stove which explains that ownership rights over carbon credits are being claimed by Co2balance UK Ltd. These samples of above/17/ have been reviewed during the site visit.

NRB Assessment:

The NRB/04/ is fixed by the PP at the time of validation as 0.95 and hence is acceptable to the verification team.

Total Sales Record:

CCL has reviewed the sales records as required by the monitoring plan for (2010- 11)/06/, which the PP has maintained in both electronic and paper records i.e. sales receipts and warranty cards. Furthermore, CCL crosschecked randomly selected electronic records/06/ to ensure that they accurately reflected the respective paper records of each sale and further verified a sample of these paper sales receipts/warranty cards while conducting the Site Visit.

Data recording and maintenance and archival was assessed and verified during the site visit and interviews with Co2balance team.

Project Database:

The Project Database/06/, /13/ &/17/ includes all information required by the methodology, including sales by cluster, results of the KSs and KPTs, factors affecting emission reductions, and adjustments to emission reduction calculations.

Mechanism to avoid double counting:

PP has an effective system to maintain the records of every particular stove sold in the project activity both in electronic and paper forms. Stoves have an individual unique serial number/06/, which avoids any chance of double counting in the entire crediting period, which was verified with cook stoves sales database/07/ and also verified during OSV. During OSV, stoves serial numbers in stove data base were randomly cross checked with sale records/07/ and found to be correct.

Based on above CCL can confirm that the characteristics of the HH sampled for this verification do not differ from the characteristics of the HH sampled for the KPT/07/, Further, the stoves assessed during the site visit were all found to be properly labeled, and the PP have ownership right on emission reductions accrued from this project activity which was confirmed by stove delivery slip. Therefore, it is concluded that the project is not double-counting emission reductions.

3.5 Monitored parameters

PP and the Kenyan team of CO2 Balance conducted the surveys and kitchen performance tests.

The results were presented in the final report to Co2balance UK Ltd which summarizes findings from the assessment of the CZK stoves.

The monitored parameters of the project are in line with the registered PDD/05/ and the applied GS methodology/B03/. Brief descriptions of the monitored parameters are listed below:

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	AF _{pj,i,y} Mass of alternative fuel i combusted in the project in year y (t _{fuel} /unit-year)

Measuring frequency/Time Interval:	Quarterly
Value Reported	NA
Reporting frequency:	Quarterly
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Surveys
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Not Applicable
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Not Applicable
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	This data presented in the ER sheet was cross checked with the MKS survey results and was also confirmed with the stakeholders during the on site visit.
How were the values in the monitoring report verified?	As discussed above the reported data has been checked with the data available in the survey results records. It has revealed that the reported data is of good quality and is credible.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The source of data is the survey. Verification team has interviewed the survey team and other personnel who are involved in data collection, recording, transfer and its quality check. Verification team was convinced that the existing data management system is maintained well to ensure the quality of the data.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	X _{re, pj,j} Woody biomass combustion avoided due to renewable energy form in year y in project (Fraction)
Measuring frequency/Time Interval:	Quarterly

Reported Value	0
Reporting frequency:	Quarterly
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Survey
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. It has to be noted that the data is collected through the surveys. The survey team is trained to collect precise information through the application of a standardized set of questions and measurements at each selected household. The survey sample size was chosen as 45 units which is more than the sample size of 25 recommended by the applied methodology/B03/. Verification team has reviewed the monitoring protocol containing the details of the survey process and contract of with third party Centre for research in Environment Kenya and the organogram containing the flow of data and its internal cross checking. This was found to be adequately implemented and the conducted MKS surveys meet the QA/QC requirements during the verification site visit by interviewing the survey team and monitoring team handling the monitored data. Thus, it is assessed that the monitoring methods represent a good monitoring practice.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Not Applicable.
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable.
Company performing the calibration(internal or external calibration):	Not Applicable.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable.
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable.
If applicable, has the reported data been cross-checked with other available data?	Not Applicable.
How were the values in the monitoring report verified?	N/A. It is to be noted data is collected through surveys but not calculated. Hence, the collected data is recorded in the survey questionnaire. This data is transferred to the MKS survey results Excel sheet/02/ and sent to H.O. Later, it is reported in the MR and ER sheet/01/02/ during the course of verification. After checking all the records and the MKS survey results Excel sheet/07/, /02/, the verification team is convinced that the

Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	reported data is credible. The source of data is the MKS survey. Verification team has interviewed the survey team and other personnel who are involved in data collection, recording, transfer and its quality check. Verification team was convinced that the existing the data management system is maintained well to ensure the quality of the data.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	$X_{re,pj,y}$ Woody biomass combustion avoided due to alternative fuels in year y in project (Fraction)
Measuring frequency/Time Interval:	Quarterly
Reported Value	0
Reporting frequency:	Quarterly
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Monitoring frequency is in accordance with the applied monitoring methodology and also the monitoring plan.
Details of monitoring equipment:	Not Applicable
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	No. It has to be noted that the data is collected through the surveys. The survey team is trained to collect the precise information. The survey sample size was chosen as 45 which is more the sample size (25) recommended by the applied methodology/B03/. Verification team has reviewed the monitoring protocol containing the details of the survey process and contract of with third party Center for research in Environment Kenya and the organogram containing the flow of data and it's internal cross checking. This was found to be adequately implemented and the conducted surveys meet the QA/QC requirements during the verification site visit by interviewing the survey team and monitoring team handling the monitored data. Thus, it is assessed that the monitoring methods represent a good monitoring practice.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Not Applicable
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does	Not Applicable

the selected frequency represent good monitoring practise?	
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	This data presented in the ER sheet was cross checked with the MKS survey results and was also confirmed with the stakeholders during the on site visit.
How were the values in the monitoring report verified?	As discussed above the reported data has been checked with the data available in the survey results records. It has revealed that the reported data is of good quality and is credible.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The source of data is the survey. Verification team has interviewed the survey team and other personnel who are involved in data collection, recording, transfer and its quality check. Verification team was convinced that the existing data management system is well maintained to ensure the quality of the data.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	Usage in year y (Fraction)
Measuring frequency/Time Interval:	Biennially
Reported Value	0.95
Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Not Applicable
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N.A. As it is a survey, accuracy of monitoring equipment is not relevant to this parameter. Verification team has reviewed the questionnaire and the interviewed the survey team and the beneficiary households using the cook stove. Thus, it was assessed that the surveys are conducted to get the precise relevant information on the usage of cook

	stove. The survey sample size was chosen as 100 units which is complying with the applied methodology/6/. Verification team has reviewed the monitoring protocol containing the details of the survey process and contract of with third party Center for research in Environment Kenya and the organogram containing the flow of data and it's internal cross checking. This was found to be adequately implemented and the conducted surveys meet the QA/QC requirements during the verification site visit by interviewing the survey team and monitoring team handling the monitored data. Hence, it is concluded that it represents a good monitoring practice.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Yes
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	Not Applicable
How were the values in the monitoring report verified?	The reported data has been checked with the data available in the survey results records. It has revealed that the reported data is of good quality and is credible.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	PP has prepared standard operating procedure to ensure the quality of the data management. PP has also declared that this monitoring system to ensure the quality of the data is anticipated to be implemented by the next monitoring period. However, during the verification team it was noticed that QA/QC processes /11/ are in place for the project activity.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	Age (Adjustment to values of B _{pj,,y} and A _{Fpj,i,y} for stoves of age x) (Fraction)
Measuring frequency/Time Interval:	Biennially
Reported Value	1
Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Digital scales
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. As per the registered PDD "Sets of digital hanging scales accurate to at least 50g will be used, ideally with Kenya Bureau of standards certification. Where equipment is acquired outside of Kenya it will be taken to the Kenya Bureau of Standards for calibration and certification. Technical specifications of the purchased and used digital scales were furnished and they were accurate to 10g /18/. As per the calibration procedure prepared based on the available guidelines during the validation/B04/, PP has chosen the calibration frequency as 3 years. It is to be noted that these equipments were purchased in May 2011/18/. Hence, they will be calibrated in May 2014 or PP will use newly purchased scales to conduct the KP tests.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Yes
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	Data presented in the KPT results Excel sheet/13/ is cross checked with the test results records of KPT/07/ that the stoves are functioning well. The same was also confirmed with the stakeholders during on-site interviews.
How were the values in the monitoring report verified?	The data reported in the MR was crosschecked with the KPT results Excel

	sheet/13/ data. The survey results records were submitted to the verification team during the site visit. After the review, the verification team confirmed that data is reliable and verifiable.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	PP has prepared standard operating procedure to ensure the quality of the data management. However, during the verification team it was noticed that QA/QC processes/11/ are in place for the project activity.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	Leakage Potential GHG emissions outside project boundary caused by project activity (t CO ₂ e per year)
Measuring frequency/Time Interval:	Biennially
Reported Value	0
Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Not Applicable
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Not Applicable
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Yes
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable

If applicable, has the reported data been cross-checked with other available data?	Not Applicable.
How were the values in the monitoring report verified?	Not Applicable.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Not Applicable.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	$X_{nr,pj,y}$ Non-renewability of woody biomass fuel in year y in project scenario (Fractional non-renewability)
Measuring frequency/Time Interval:	Biennially
Reported Value	0.95
Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	NA
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	It has to be noted this is a calculated value by a third party, C4 Ecosolutions, which is a consulting company specialized in carbon sequestration and climate change adaptation.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Yes
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	N.A. As this study is conducted by third party, the data is assessed as reliable.

How were the values in the monitoring report verified?	This data provided in the MR was cross checked with the third party NRB report and found correct/5/. Hence, the values are assessed as correct.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	PP has prepared standard operating procedure to ensure the quality of the data management. However, during the verification team it was noticed that QA/QC processes/11/ are in place for the project activity.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	B _{bl,y} Mass of woody biomass combusted in the baseline in year y. (t biomass/ t/ year)
Measuring frequency/Time Interval:	Biennially
Reported Value	3.97
Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Kitchen Performance Test reports
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. As per the registered PDD "Sets of digital hanging scales accurate to at least 50g will be used, ideally with Kenya Bureau of standards certification. Where equipment is acquired outside of Kenya it will be taken to the Kenya Bureau of Standards for calibration and certification. Technical specifications of the purchased and used digital scales were furnished and they were accurate to 10g /18/. As per the calibration procedure prepared based on the available guidelines during the validation/B04/, PP has chosen the calibration frequency as 3 years. Further, the new digital scales were purchased in May 2011/18/. Hence, these scales will be calibrated in May 2014 or PP will use newly purchased scales to conduct the KP tests.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards /	Yes

manufacturers specification	
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	N.A. This value is determined during the baseline study and is consistently applied to determine the emission reductions.
How were the values in the monitoring report verified?	As discussed above, the value was reviewed and noticed the value is consistent with the ex-ante value provided in the registered PDD.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	N.A. This is already determined and assessed during the validation
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	Bpl,y Mass of woody biomass combusted in the baseline in year y. (t biomass/ t/ year)
Measuring frequency/Time Interval:	Biennially
Reported Value	2.17
Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Kitchen Performance Test reports
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. As per the registered PDD "Sets of digital hanging scales accurate to at least 50g will be used, ideally with Kenya Bureau of standards certification. Where equipment is acquired outside of Kenya it will be taken to the Kenya Bureau of Standards for calibration and certification. Technical specifications of

	the purchased and used digital scales were furnished and they were accurate to 10g /18/. As per the calibration procedure prepared based on the available guidelines during the validation, PP has chosen the calibration frequency as 3 years. Further, the new digital scales were purchased in May 2011/18/. Hence, these scales will be calibrated in May 2014 or PP will use newly purchased scales to conduct the KP tests.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Yes
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	N.A. This value is determined during the baseline study and is consistently applied to determine the emission reductions.
How were the values in the monitoring report verified?	As discussed above, the value was reviewed and noticed the value is consistent with the ex-ante value provided in the registered PDD.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	N.A. This is already determined and assessed during the validation
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PDD):	New Stove KPT Adjustment to values of $(B_{bl,y} - B_{pj,y})$ and $AF_{pj,i,y}$ for new stove models (Fraction)
Measuring frequency/Time Interval:	Biennially
Reported Value	1

Reporting frequency:	Biennially
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.
Details of monitoring equipment:	Digital scales – accurate to 2 decimal places.
Is accuracy of the monitoring equipment as stated in the PDD? If the PDD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Not Applicable
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	Yes
Is the calibration interval in line with the monitoring plan of the PDD? If the PDD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not Applicable
Company performing the calibration(internal or external calibration):	Not Applicable
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Not Applicable
Is (are) calibration(s) valid for the whole reporting period?	Not Applicable
If applicable, has the reported data been cross-checked with other available data?	Not Applicable
How were the values in the monitoring report verified?	Not Applicable
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Not Applicable
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable

EX-Ante Parameters:

Parameter	N_y Number of stoves in year (Number)
Values used:	7,946
Purpose of data	Calculation of emissions reductions
Source and Verification of the source	Total distribution record
Parameter	EF_{bl.bio,co2} CO ₂ emission factor arising from use of wood-fuel in baseline scenario (tCO ₂ /t _{biomass})

Default values used:	1.7472
Purpose of data	Calculation of baseline emissions
Source and Verification of the source	Calculated from IPCC defaults

Parameter	EF_{bj.bio,co2} CO ₂ emission factor arising from use of wood-fuel in baseline scenario (tCO ₂ /t _{biomass})
Default values used:	1.7472
Purpose of data	Calculation of project emissions
Source and Verification of the source	Calculated from IPCC defaults

Parameter	EF_{bl.bio,non-co2} Non-CO ₂ emission factor arising from use of wood-fuel in baseline scenario (tCO ₂ /t _{biomass})
Default values used:	0.1355952
Purpose of data	Baseline emission calculation
Source and Verification of the source	Calculated from IPCC defaults – refer to ‘PDD supplementary data Aberdares v.02.

Parameter	EF_{bj.bio,nonco2} Non CO ₂ emission factor arising from use of wood-fuel in project scenario (tCO ₂ /t _{biomass})
Default values used:	0.1355952
Purpose of data	Baseline emission calculation
Source and Verification of the source	Calculated from IPCC defaults – refer to ‘PDD supplementary data Aberdares v.02’.

Parameter	X_{nrb,bl,y} Non-renewability status of woody biomass fuel scenario i during year y (Fractional non-renewability)
Default values used:	0.95
Purpose of data	ER calculation
Source and Verification of the source	Report compiled by Anthony Mills (PhD) and Diane Southey (MSc) C4 EcoSolutions (Pty) Ltd., Cape Town, South Africa

Parameter	EF_{bio,prod,co2} CO ₂ emission factor arising from production of wood-fuel (tCO ₂ /t _{fuel})
Default values used:	0
Purpose of data	Calculation of emissions
Source and Verification of the source	IPCC defaults or project-relevant measurement reports

Parameter	EF_{bio,prod,non-co2} Non-CO ₂ emission factor arising from production of wood fuel (tCO ₂ /t _{biomass})
Default values used:	0
Purpose of data	Calculation of emissions
Source and Verification of the source	IPCC defaults or project-relevant measurement reports

Parameter	EF_{af,co2} CO ₂ emission factor arising from use of alternative fuel (tCO ₂ /t _{fuel})
-----------	---

Default values used:	NA
Purpose of data	NA
Source and Verification of the source	NA

Parameter	EF_{af, non-co2} Non-CO2 emission factor arising from use of alternative fuel (tCO ₂ /t _{fuel})
Default values used:	NA
Purpose of data	NA
Source and Verification of the source	NA

Parameter	EF_{af, prod, non-co2} Non-CO2 emission factor arising from use of alternative fuel (tCO ₂ /t _{fuel})
Default values used:	NA
Purpose of data	NA
Source and Verification of the source	NA

Parameter	AF_{bl,i,y} The mass of alternative fuel i combusted in the baseline year (t _{fuel} /unit-year)
Default values used:	0
Purpose of data	Calculation of emissions
Source and Verification of the source	Baseline Kitchen Surveys

Parameter	X_{re,bl,y} Woody biomass combustion avoided due to renewable energy fuels form in baseline year (i.e. solar cookers, agricultural residues, etc) (Fraction)
Default values used:	0
Purpose of data	NA
Source and Verification of the source	Baseline Kitchen Surveys

Parameter	X_{af,bl,y} Woody biomass combustion avoided due to alternative fuels in baseline (Fraction)
Default values used:	0
Purpose of data	Calculation of emissions
Source and Verification of the source	Baseline Kitchen Surveys

In summary, the verification team confirms that all the ex-ante and ex-post parameters are monitored in accordance with the monitoring plan/05/ and applied methodology/B03/. The verification took cognizance of § 191,192 and 193 of CDM Project Standard and § 225, 233 to 246 of VVS version 07.

3.6 Monitoring responsibility

Verification team evaluated the management system and organisational structure as mentioned in the MR and Monitoring manual/11/. This included roles and responsibilities,

data collection, transfer and aggregation procedures, training of personnel/09/, data storage and archiving and emergency procedures for the monitoring system. On the basis of onsite interview with the employee of Co2balance UK Ltd, involved in the project monitoring and data collection, inspection of data storage, & stoves records and document review. Co2balance UK Ltd has appointed Education & Liaison Officer in all the regions of project activity. Carbon Check can confirm that the responsibilities and authorities for monitoring and reporting are appropriate and effective for the project type and hence in accordance with monitoring plant of the registered PDD and applied monitoring methodology.

3.6.1 Accuracy of equipment

There is no particular monitoring equipment's under purview of PP for monitoring of this project type, except weighing scale used in carrying out for KPT as detailed in section 4.4 (i) above, hence assessment of accuracy and calibration of the monitoring equipment is not applicable. Furthermore neither the registered PDD/05/ nor applied GS monitoring methodology for this particular project technology, describes the requirement of calibration of monitoring equipment's.

3.7 Deviation from and/or Revision of the registered monitoring plan

NA

3.8 Assessment of data and calculation of greenhouse gas emission reductions

The Project Proponent submitted all the relevant data and parameters required to be monitored to the verification team along with the monitoring report. All the parameters required to monitored are as per the registered PDD have been monitored and reported in the monitoring report. CCL reviewed the calculation worksheet /02/ for the emission reduction calculation for the monitoring period 01-04-2013 to 31-03-2014. CCL confirms that the formulas, conversions, aggregations and factors are consistent with the monitoring plan in the PDD. The reported data was checked as follows:

- All the necessary data and all the parameters required to be monitored in the registered PDD/05/ were reviewed to ensure accuracy;
- The Project Sales Database kept electronically/06/ was reviewed along with an interview with the person responsible for data entry and data review from the Co2balance UK Ltd, to confirm the number of no stoves sold during the monitoring period. Sample sales receipts were also assessed for further check during OSV.

3.8.1.1 Baseline emissions

As the baseline fuel and the project fuel are the same and the baseline emission factor and project emission factor are considered the same, the overall GHG reductions achieved by the project activity.

Baseline emissions in tCO₂/stove/year are calculated as follows:

$$BE_y = X_{nrb,bl,y} \times B_{bl,y} \times EF_{bl,bio,CO_2} + \sum (AF_{bl,i,y} \times EF_{af,CO_2,i})$$

+Σ(Non-CO2 emissions during cooking)
+Σ(GHG emissions during production of the fuels)Eqn B.1a

Where:

BE_y = baseline emissions in year y (in tonnes CO₂e per year) specific to cluster and Unit chosen

$X_{nrb,bl,y}$ = the non-renewable fraction of the woody biomass harvested in the project collection area in year y in the baseline scenario

$B_{bl,y}$ = the mass of woody biomass consumed during cooking in the baseline in year y (tonnes/year)

$EF_{bl,bio,co2}$ = the CO₂ emission factor for use of the biomass fuel in the baseline scenario in tonnes CO₂ per tonne fuel

$AF_{bl,i,y}$ = The mass of alternative fuel i in the baseline in year y in accordance with trends projected throughout the project period, in tonnes. This mass can be set to zero in cases where the KT is appropriately designed to subsume alternative fuels (approach 3).

$EF_{af,co2,i}$ = The CO₂ emission factor for use of the alternative fuel i in the baseline in tonnes of CO₂ per tonne fuel.

Non-CO₂ emissions during cooking

$$= \sum (B_{bl,y} \times EF_{bl,bio,non-co2,i}) + \sum (AF_{bl,i,y} \times EF_{af,i,non-co2_gas_i})$$

.....Eqn B.1b

GHG emissions during production of the fuels

$$= X_{nrb} \times B_{bl,y} \times EF_{bio,prod,co2} + \sum (AF_{bl,i,y} \times EF_{af,prod,co2,i}) + \sum (B_{bl,y} \times EF_{bio,prod,non-co2_gas_i}) + \sum (AF_{bl,i,y} \times EF_{af,i,prod,non-co2_gas_i})$$

.....Eqn B.1c

Where:

$EF_{bl,bio,non-co2,i}$ = Emission factor for GHG gas i in the baseline scenario in units of tonnes gas per tonne wood-fuel

$EF_{af,non-co2_gas_i}$ = Non-CO₂ emission factor during cooking for alternative fuel i for GHG gas i in tonnes gas per tonnes fuel

$EF_{bio,prod,co2}$ = CO₂ emission factor for wood-fuel during production in tonnes gas per tonnes fuel

$EF_{af,prod,co2,i}$ = CO₂ emission factor for fuel i during production in tonnes gas per tonnes fuel

$EF_{bio,prod,non-co2_gas_i}$ = Non-CO₂ emission factor for wood-fuel during production in tonnes gas per tonne fuel

$EF_{af,prod,non-co2_gas_i}$ = Non-CO₂ emission factor for alternative fuel i for GHG gas i during production in tonnes gas per tonnes fuel

Baseline Emissions	
BEy	7.14
$X_{nrb,bl,y}$ (fraction)	0.95
$B_{bl,y}$ (t/HH/year)	3.97
$EF_{bl,bio,CO2}$ (tCO ₂ /t _{wood})	1.7472
$AF_{bl,i,y}$ (t/HH/year)	0

EF _{faf,CO2}	(tCO ₂ /t _{fuel})	0
Non-CO2 Emissions		0.538916139
EF _{bl,bio,non-co2}	(tCO ₂ /t _{wood})	0.1355952
EF _{bio,CH4}	(tCO ₂ /t _{wood})	0.117
EF _{bio,N2O}	(tCO ₂ /t _{wood})	0.0185952
EF _{faf,i,non-co2 gas}	(tCO ₂ /t _{fuel})	0
GHG Emissions During Production		0
EF _{bio,prod,co2}	(tCO ₂ /t _{wood})	0
EF _{faf,prod,co2}	(tCO ₂ /t _{fuel})	0
EF _{bio,prod,non-co2 gas}	(tCO ₂ /t _{wood})	0
EF _{faf,prod,non-co2 gas}	(tCO ₂ /t _{fuel})	0

3.8.1.2 Project emissions

As the baseline fuel and the project fuel are the same and the baseline emission factor and project emission factor are considered the same, the overall GHG reductions achieved by the project activity.

Project emissions in tCO₂/stove/year are calculated as follows:

$$PE_y = X_{nrb,pj,y} \times B_{pj,y} \times EF_{pj,bio,CO2} + \sum (AF_{pj,i,y} \times EF_{af,CO2,i})$$

+Σ(Non-CO2 emissions during cooking)
+Σ(GHG emissions during production of the fuels)Eqn P.1a

Where:

PE_y = project emissions in year y (in tonnes CO₂e per year) specific to cluster and Unit chosen

X_{nrb,pj,y} = the non-renewable fraction of the woody biomass harvested in the project collection area in year y in the project scenario

B_{pj,y} = the mass of woody biomass consumed during cooking in the project each year (tonnes/year)

AF_{pj,i,y} = The mass of alternative fuel i in the project in year y in accordance with trends projected throughout the project period, in tonnes. This mass can be set to zero in cases where the KT is appropriately designed to subsume alternative fuels (approach 3).

Non-CO2 emissions during cooking

$$= \sum (B_{pj,y} \times EF_{pj,bio,non-co2,i}) + \sum (AF_{pj,i,y} \times EF_{af,i,non-co2_gas_i}) \dots\dots\dots \text{Eqn P.1b}$$

GHG emissions during production of the fuels

$$= X_{nrb} \times B_{pj,y} \times EF_{bio,prod,co2}$$

$$+ \sum (AF_{pj,i,y} \times EF_{af,prod,co2,i})$$

$$+ \sum (B_{pj,y} \times EF_{bio,prod,non-co2_gas_i})$$

$$+ \sum (AF_{pj,i,y} \times EF_{af,i,prod,non-co2_gas_i}) \dots\dots\dots \text{Eqn B.1c}$$

Project Emissions		
PEy		3.90
Xnrb,pj,y	(fraction)	0.95
Bpj,y	(t/HH/year)	2.17
EFpj,bio,CO2	(tCO ₂ /t_wood)	1.7472
AFpj,i,y	(t/HH/year)	0
EFaf,CO2	(tCO ₂ /t_fuel)	0
Non-CO2 Emissions		
EFpj,bio,non-co2	(tCO ₂ /t_wood)	0.1355952
EFbio,CH4	(tCO ₂ /t_wood)	0.117
EFbio,N2O	(tCO ₂ /t_wood)	0.0185952
EFaf,i,non-co2 gas	(tCO ₂ /t_fuel)	0
GHG Emissions During Production		
EFbio,prod,co2	(tCO ₂ /t_wood)	0
EFaf,prod,co2	(tco2/t_fuel)	0
EFbio,prod,non-co2 gas	(tCO ₂ /t_wood)	0
EFaf,prod,non-co2 gas	(tCO ₂ /t_fuel)	0

3.8.1.3 Leakage emissions

As per the monitoring plan of the registered PDD /05/, leakage is considered only when new stoves are installed. As per the registered PDD, PP has envisaged to implement the project by December 2011/05/. However, PP has installed only 9,311 /05/,/06/ cook stoves till June 2011. Since then no cook stoves are installed to date. Further, in the current monitoring period there are no new stoves installed. Hence leakage is considered zero and it is consistent with the estimation provided in the registered PDD/05/.

Leakage emissions in tCO₂/stove/year are calculated as follows:

$$LE_2 = 0.01793 \times n$$

$$LE_2 = x$$

$$LE_{3,4,...n} = 0$$

$$LE_2 = 0.01793 \times 0$$

$$LE_2 = 0$$

3.9 Assessment of actual emission reductions with the estimated emission reductions in PDD

Estimated emission reduction in the PDD and actual accrued emission reduction in the MR over the applied monitoring period was comprehensively assessed by the verification team, through documents review; onsite visit to the house holds end users of project technology i.e. cook stoves and interview with them.

The comparison of estimated/ex-ante value with monitored value of the parameters for emission reduction for year 2013 and 2014 covering the applied monitoring period:

Estimated Emission Reduction as per Registered/Approved PDD:	73,833 tCO ₂ e
Actual Emission Reduction for the Monitoring Period	24,442 tCO ₂ e
Has any increase of CER's occurred?	No
Reason for Increase of CER's	Not applicable as there is no increase in the emission reduction from the approved revised PDD.

The verification took cognizance of § 252 & 253 of CDM Project Standard (version 07.0) and § 273 (c) of VVS (version 07.0), thus in summary, the verification team confirms that actual emission reduction is lower than the estimate of the approved PDD for the current monitoring period.

3.10 Compliance with the sustainability monitoring plan

Sustainability monitoring plan in the registered PDD and GS passport is completely followed by the PP and the same is followed in the Monitoring report. No changes are found from the sustainability-monitoring plan of PDD and GS passport. The same was assessed and verified by the verification team during on site visit.

All the non-neutral indicators are monitored and verified by the verification team.

3.11 Monitoring of Gold Standard Sustainability Indicators

The verification team checked the sustainable development indicator parameters during the site visit and interview. Following Include the discussion on any additional parameters that are monitored in accordance with the monitoring plan for sustainability indicators as referred in the GS-VER-PDD ver. 09/05/ and monitoring report (version 03 dated 08/09/2014).

Indicator	Monitoring Source	Variables, Unit and Frequency of measurement	Assessment
Air Quality	Kitchen Performance Tests & Kitchen Surveys	As outlined in the GS Passport, total suspended particulate matter (TSPM) & Respirable suspended particulate matter (RSPM) will be monitored by proxy measurement of wood fuel savings. The justification for this approach explained in section F.2 of the passport. Two monitoring techniques employed to ascertain ongoing effect of the project on air quality, monitoring kitchen survey (MKS) and kitchen performance test (KPT) Frequency of KPT &	Kenyan project team of Co2balance UK Ltd, monitored this via surveys/13/. All personnel of Co2balance UK Ltd, involved in the survey/13/ were interviewed during OSV and found to be competent. The DoE checked the field and laboratory test results of the stoves as detailed in construction manual /10/ to confirm that they significantly reduce particulate matter (TSPM & RSPM) and other health damaging particulates. During OSV, verification team also interviewed the households people where these improved stoves has been implemented and they confirm substantial reduction in indoor air pollution as improved cook stoves emit very less smoke as compared to conventional

		kitchen surveys Bi-annually and quarterly, respectively	stoves in baseline scenario. KPT study/13/ shows that wood fuel combustion has decreased as a result of the project (from 10.88 to 5.9483) Hence DoE confirms the air quality improvement in current monitoring period.
Quality of employment	Stove contractor records-collated	Number of contracts/ people employed by project in host country and no. of training events organised for people employed. Frequency of monitoring – continuously.	During the site visit, verification team interviewed the personnel employed by the project and confirmed that wages are above local norms and that they are paid on time. Moreover the working conditions are safe and appropriate. Training records/09/ are also checked to ensure that training has taken place with the key employees who are currently engaged with the project.
Livelihood of the poor	Kitchen Performance Tests & Kitchen Surveys	As outlined in the GS Passport, impact on livelihood of the poor by way of reduction in amount of money spent on wood fuel. The justification for this approach explained in section F.2 of the passport. Two monitoring techniques employed to ascertain ongoing effect of the project livelihood of the poor, monitoring kitchen survey (MKS) and kitchen performance test (KPT) Frequency of KPT & kitchen surveys Biennially and quarterly, respectively	Kenyan project team of Co2balance UK Ltd, monitored this via surveys/13/. All personnel of Co2balance UK Ltd, involved in the survey /13/ were interviewed during OSV and found to be competent. The survey/13/ results indicated both time and money savings. During the site visit, in which dozens of homes were visited, the most common response among stove users was that they appreciate that the stove saves them time for now collecting wood and money because they don't have to buy wood. Therefore the survey results were found credible. During OSV, DoE interviewed the household verification team asked question about mode of sourcing of woods and money spent on buying of woods in baseline and project scenario. It was confirmed that households use much lesser fuel (2-3 branches of trees collected from nearby jungle) and they confirm that they are not spending much money and time in firewood collection and their expenditure on buying of fire wood has also reduced significantly. Hence, DoE confirms significant improvement in livelihood of poor in this monitoring period.

Access to affordable and clean energy services	Kitchen Performance Tests & Kitchen Surveys	As outlined in the GS Passport, increased access to affordable and clean energy services monitored by proxy using change in volume of fuel consumption. The justification for this approach explained in section F.2 of the passport. Two monitoring techniques employed to ascertain ongoing effect of the project on access to affordable and clean energy services, monitoring kitchen survey (MKS) and kitchen performance test (KPT) Frequency of KPT & kitchen surveys Biennially and quarterly, respectively	Kenyan project team of Co2balance UK Ltd, monitored this via surveys/13/. All personnel of Co2balance UK Ltd, involved in the survey were interviewed during OSV and found to be competent. The survey results/13/ indicated access to affordable and clean energy services by change in volume of fuel consumption. During the site visit, in which dozens of homes were visited, households confirmed that reduction in fuel wood consumption and there is sharp decline in volume of traditional fuel (wood) consumption among stove beneficiaries. Therefore the survey results were found credible. During OSV, DoE interviewed the household verification team asked question about mode of sourcing of woods and money spent on buying of woods in baseline and project scenario. It was confirmed that households use much lesser fuel (2-3 branches of trees collected from nearby jungle) and they confirm that they are not spending much money and time in firewood collection and their expenditure on buying of fire wood has also reduced significantly.. Hence, DoE confirms that implementation of stove resulted into substantial reduction in traditional fuel consumption in this monitoring period.
Quantitative employment s and income generation	Stove contractor/pr oject developer records – collated	Stove contractor/ Project developer's record for household income generation from people employed. Salaries paid to employees used to assess income generation Frequency of monitoring – continuously.	During the site visit, verification team interviewed the personnel employed by the project and confirmed that wages are above local norms and that they are paid on time. Sample contract between CO2 balance UK Ltd & local stove distributor checked and project developer records suggested total income generation resulting from people employed for the project activity. For this monitoring period, verification team checked the project developer's record for salaries paid out. Though it was short of target but DoE confirms

			that there is major improvement on the baseline.
--	--	--	--

3.12 Issues remaining from the previous verification period or during validation

This is the 3rd periodic verification with period 01/04/2013 to 31/03/2014 and there were FAR 1, 2 and FAR 3 (from last Verification) and have been converted to CAR 07, 08 and 09 and successfully closed upon review of PP's response during this verification.

3.13 Quality and Management System Assurance

The project's management system as stated in MR was reviewed to determine the effectiveness of its implementation. The monitoring plan has clearly prescribed the management and operational procedures for monitoring, recording, data management, and training in accordance with the registered PDD/05/ dated 24/04/2012. CCL verified the same through document reviews and site visit interviews the management system and quality assurance procedures and has found them to be appropriate and effective.

The verification team confirms that the management system as detailed in MR is in place; with the responsibilities properly identified and in place. A monthly check of data and record monitored continuously is monthly cross verified by the country manager and then by CEO of the Co2balance UK Ltd after every three months and also an internal audit for data accuracy and recording an archival practice is performed by the CEO of the company. The same was confirmed during visit of Co2balance in Kenya with the employees including data entry and recording manager, country manager and CEO and verification team found it sufficient in order to achieve quality management system in place for this project type.

APPENDIX A

CARBON CHECK Certification statement for the Verification Report CCL255GS883/ AICS/20140224

Carbon Check (pty) Ltd, the DOE, has performed the verification of the registered GS project activity "GS Registration Number GS883 "Aberdares Improved Cook Stoves". The project activity is designed to generate emission reductions by dissemination and use of efficient cook stoves, which minimises the fuel wood consumption and hence resulting in social benefits such as money savings, time saving and health benefits etc.

The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project. It is DOE's responsibility to express an independent verification statement on the reported GHG emission reductions from the project. The verification is carried out in-line with the VVS and Gold Standard requirements.

The verification was performed to identify the compliance of the project activity with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions, through obtaining evidence and information on-site that included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

This statement covers verification period of 365 days between 01/06/2013 and 31/05/2014.

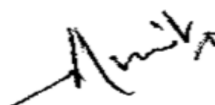
The DOE has raised 02 clarifications, 13 corrective action requests and 01 FAR, all of which have been successfully resolved.

The DOE considers it necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan in the registered PDD are fairly stated.

The DOE, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 24,442tCO₂ equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records. Carbon Check is of the opinion that the project activities is in line with the Gold Standard principles and certify 24,442tCO₂ emission reductions.



2014-11-19
Adam Simcock - Final Approver
Carbon Check (Pty) Ltd



2014-11-19
Amit Anand - Team Leader
Carbon Check (Pty) Ltd



APPENDIX B

Carbon Check Gold Standard Verification Protocol

Aberdares Improved Cook Stoves

Report No. CCL255AICS20140224



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Project implementation					
1.1 Have all physical features proposed in the registered PDD been implemented at the project site? § 184 of CDM Project Standard and § 260 (a), 261 (a) and 262 (a) of VVS version 07.	/MR/ /GSPP/ /PDD/	DR, SV	As per Passport and PDD, project activity is involved in distribution of efficient cook stoves. All stoves were distributed during the period 2010 to 2011. ICS were found to be in use in households	OK	OK
1.2 Has the project activity been operated in accordance with the project scenario described in the registered PDD and relevant guidance? Reference: §75 and § 185 of CDM Project Standard and § 260 (a), 261 (a) and 262 (b), (c) of VVS version 07.	/MR/ /GSPP/ /PDD/	DR, SV	As per Passport and PDD, project activity involves in distribution of efficient cook stoves which is explicitly explained in MR. All the stoves were distributed during the period 2010 to 2011.	OK	OK
1.3 If the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site? § 188 of CDM Project Standard and 262(a) of VVS version 07.	/MR/ /XLS/	DR SV	Yes, the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site.	OK	OK
1.4 Is the diagram provided of the project layout (including a diagram of the project boundary and the labelling and location of each meter and other equipment) included and consistent with what was found at site? Is the description in the MR consistent with the registered PDD?	/MR/ /GSPP/ /PDD/	DR SV	Project description provided under section A.2 of the MR is as per the registered PDD. Monitoring plan does not require and metering equipment as this is a cook-stove project.	OK	OK
1.5 Is the start date of monitoring period consistent?	/MR/ /PDD/	DR	Yes, the start dates of monitoring period consistent.	OK	OK

⁴ MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.6 Is the monitoring report consistently filled with respect to all sections as required by its guideline of filling the monitoring report?	/MR/	DR	As there is no specific guidelines stipulated and mandated by Gold Standard hence PP has used UNFCCC template for monitoring report with all required information for verification and monitoring. Following findings has been raised in relation to template used for MR: <u>Corrective Action Request No.01</u> As there is no specific guidelines stipulated and mandated by Gold Standard hence PP has used UNFCCC template for monitoring report with all required information for verification and monitoring. Following findings has been raised in relation to template used for MR: 1. Template used for MR is not latest. 2. PP need to follow the UNFCCC latest Guidelines for completing the monitoring report form. 3. Sectoral scopes of applied methodology also missing. 4. In section A.1 of the MR is not as per the Guideline requirements. However, point C is missing in the section. PP is requested to revise the section. <u>Corrective Action Request No.02</u> PP is requested to provide all the links and references used in section B.1 of the MR.	CAR 01, CAR 2	OK
1.7 Does the CER's obtained for the monitoring period within the limit of estimate in the registered PDD? Is the claimed CER's justifiable?	/MR/	DR	Monitoring report does provide the comparison of estimated emission reduction and achieved emission reduction. However, actual CERs in the monitoring period are lower than estimated CERs in the registered PDD.	OK	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.8 Is the monitoring system provided in line diagrams showing all relevant monitoring points?	/MR/	DR SV	Yes, the monitoring system provided in line diagrams showing all relevant monitoring points	OK	OK
2. Monitoring plan and methodology					
2.1 Is the monitoring plan established in accordance with the monitoring methodology? § 186 of CDM Project Standard and § 264 of VVS version 03.	/MR/	/DR/ /SV/	FAR 3 (from last Verification) is converted to CAR 9: In the MR, PP has responded to the earlier FAR 7 raised during the verification that the PP shall conduct the efficiency tests for broken and not broken stoves during the next KPT. PP has conducted the KPT during 2012 and next KPT is due in June 2014. Thus, this is forwarded to the next verification and DOE needs to assess this FAR.	CAR-9	OK
2.2 In case the implemented monitoring plan defers from the monitoring methodology, has any requests for revision to or deviation from the monitoring methodology been officially communicated to the CDM EB? § 193 of CDM Project Standard and § 2286 of VVS version 07. Deviations are required to be approved by the UNFCCC. Deviations need to be registered with the GS foundation as per GS Toolkit 1.6 "Additionality and conservativeness deviations".	/MR/	/DR/	NA	OK	OK
2.2.1 Have the above changes to the monitoring plan been approved by the CDM EB?	/MR/	/DR/	NA	<u>OK</u>	OK
3. Monitoring and the monitoring plan					



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.1 Is monitoring established in full compliance with the monitoring plan, contained in the registered PDD (or new monitoring plan approved by the CDM EB)? § 191 of CDM Project Standard and § 268 of VVS version 07	/MR/	/DR/ /SV/	Monitoring is established in full compliance with the monitoring plan, contained in the registered revised and GS approved PDD.	Refer CAR-9	OK
3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions? Are there any differences between the methodology and the monitoring plan in the registered PDD? Have all the parameters and default values are correctly and transparently applied to calculate the monitored GHGs emission reduction?	/MR/	DR	Yes, all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions? Are there any differences between the methodology and the monitoring plan in the registered PDD. However CAR 11 was raised for missing parameters. <u>Corrective Action Request NO.11</u> Following parameters listed in section B.6.2 of PDD are not provided in Section D.1 of MR: a) N_y b) $X_{re,bl,y}$ c) $X_{af,bl,y}$ d) $X_{nrb,bl,y}$	CAR-11	
3.2.1 Was the monitoring equipment for baseline emission parameters controlled and monitoring results recorded as per approved frequency?	/MR/	DR	PP is requested to provide the Comparison of Fuel use data between Baseline KS and MKS in response of "Q40" in respective section of MR.	CAR-05 and GL1	OK
3.2.2 Was the monitoring equipment for baseline emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/MR/	DR	Monitoring has been conducted by the Project Participant CO2 Balance and it's Kenyan team. This is in line with registered PDD.	OK	OK



Carbon Check's Checklist question	Ref.	Mov ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.3 Are all project emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	/MR/	DR	Not applicable	OK	OK
3.3.1 Was the monitoring equipment for project emission parameters controlled and monitoring results recorded as per approved frequency?	/MR/	DR	Not applicable	OK	OK
3.3.2 Was the monitoring equipment for project emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/MR/	DR	Not applicable	OK	OK
3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions?	/MR/	DR	Not applicable	OK	OK
3.4.1 Was the monitoring equipment for leakage emission parameters controlled and monitoring results recorded as per approved frequency?	/MR/	DR	Not applicable	OK	OK
3.4.2 Was the monitoring equipment for leakage emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/MR/	DR	Yes, the monitoring equipment for leakage emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan.	OK	OK
3.5 Were all monitoring parameters available and verifiable through the whole monitoring period?	/MR/	DR SV	All the monitoring parameters are available and verifiable as project proponent has provided all sources of data used in the monitoring report. However, For missing parameter CAR has been raised.	CAR 11, 12	OK
3.5.1 In case, only partial monitoring data is available and PP(s) provide estimations or assumptions for the rest	/MR/	DR	Complete set of monitoring data is available with PP and same was checked during the site visit	OK	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
of data, was it possible to verify those estimations and assumptions?	/ER/	SV	and sample copies of the data is obtained by the validation team for future records.		
3.6 Was management and operation system established and operated in accordance with the monitoring plan?	/MR/	DR SV	Management and operation system is established and operated in accordance with the registered monitoring plan.	OK	OK
3.7 Was it possible to verify that involved management and operations personal is fully aware of the responsibilities and perform all operations according to the registered monitoring plan and internally developed manuals?	/MR/	DR SV	Management and operation system is established and operated in accordance with the registered monitoring plan.	OK	OK
3.8 Does the monitoring system provide organizational structure, role and responsibilities, emergency procedures?	/MR/	DR SV	Management and operation system is established and operated in accordance with the registered monitoring plan.	OK	OK
3.9 Have any uncertainties identified being addressed?	/MR/	DR SV	Management and operation system is established and operated in accordance with the registered monitoring plan.	OK	OK
3.10 Has there being any deviation from the Sustainable Development Matrix? What is the Carbon Checks opinion of the severity of the deviation? The GS will then inform on the required action.	/MR/ /GSPP/	DR	There is no deviation found in the monitoring report from the sustainable development matrix of the passport.	OK	OK
3.11 Does monitoring report contain a clear and transparent organisation structure with regards to flow of information of data, data monitoring, and archiving and data protection?	/MR/	/DR/	Management and operation system is established and operated in accordance with the registered monitoring plan.	OK	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.12 Is there any procedure of training to the personal involved in the GHG monitoring described and documented?	/MR/	/DR/	Yes, for procedure of training to the personal involved in the GHG monitoring described and for document CAR and CL was raised. <u>FAR 1 (from last Verification) is converted to CAR 7:</u> PP has described in the response CAR 5 and CL 1 that the fully operational SOP is under preparation and will be in place by the next verification. Accordingly, verification team has raised a FAR 1 raised. It involves the assessment on the preparation and execution of the fully operational SOP. <u>FAR 2 (from last Verification) is converted to CAR 8:</u> PP has described that the data was lost and could not submit all the documents related to the conducted trainings. However, the verification team is able to confirm that all the personnel working on the project are competent enough to conduct the efficient surveys and ensure the quality of the data. The necessary measures to avoid such data loss were not provided in the monitoring report. Hence, PP is required to demonstrate the data handling procedures and its implementation by the next verification. Thus, FAR 2 is raised.	CL 1 and CAR 7, 8	OK
4. Parameters					



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.1 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):	/MR/ /PDD/	DR	Title: Mass of alternative fuel i combusted in the project in year y Indication: $AF_{pj,i,y}$ Units: t_fuel/unit-year Estimated value (ex-ante): NA Measured value (ex-post): NA	OK	OK
4.2 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):	/MR/ /PDD/	DR	Title: Woody biomass combustion avoided due to renewable energy form in year y in project Indication: $X_{re,pj,y}$ Units: Fraction Estimated value (ex-ante): - Measured value (ex-post): 0	OK	OK
4.3 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):	/MR/ /PDD/	DR	Title: Percentage of stoves of age x remaining in use in year Indication: Usage in year y Units: Fraction Estimated value (ex-ante): - Measured value (ex-post): 0.95	OK	OK
4.4 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):	/MR/ /PDD/	DR	Title: Adjustment to values of $B_{pj,,y}$ and $AF_{pj,i,y}$ for stoves of age x Indication: Age Units: Fraction Estimated value (ex-ante): - Measured value (ex-post): 1	OK	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.5 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):			Title: Potential GHG emissions outside project boundary caused by project activity Indication: Leakage Units: Fraction Estimated value (<i>ex-ante</i>): 0 Measured value (<i>ex-post</i>): L3=0	OK	OK
4.6 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):			Title: Non-renewability status of woody biomass fuel scenario i during year y Indication: $X_{nr,p,y}$ Units: Fractional non-renewability Estimated value (<i>ex-ante</i>): 0.95 Measured value (<i>ex-post</i>): 0.95		
4.7 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):			Title: Mass of woody biomass that is combusted in the baseline in year y Indication: $B_{bl,y}$ Units: t_biomass/stove/year Estimated value (<i>ex-ante</i>): 0.81 Measured value (<i>ex-post</i>): 3.97		
4.8 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):			Title: Mass of woody biomass that is combusted in the baseline in year y Indication: $B_{pl,y}$ Units: t_biomass/stove/year Estimated value (<i>ex-ante</i>): 0.81 Measured value (<i>ex-post</i>): 2.17		



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.9 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>):			Title: Adjustment to values of ($B_{bl,y} - B_{pj,,y}$) and $AF_{pj,i,y}$ for new stove models Indication: New Stove KPT Units: Fraction Estimated value (<i>ex-ante</i>): - Measured value (<i>ex-post</i>): 1		
4.10 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Number of stoves in year Indication: N_y Units: Number Default/Used value: 7,946	OK	OK
4.11 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: CO ₂ emission factor arising from use of wood-fuel in baseline scenario Indication: $EF_{bl,bio,co2}$ Units: tCO ₂ /t _{biomass} Default/Used value: 1.7472	OK	OK
4.12 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: CO ₂ emission factor arising from use of wood-fuel in baseline scenario Indication: $EF_{pj,bio,co2}$ Units: tCO ₂ /t _{biomass} Default/Used value: 1.7472	OK	OK
4.13 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Non-CO ₂ emission factor arising from use of wood-fuel in baseline scenario Indication: $EF_{bl,bio,non-co2}$ Units: tCO ₂ /t _{biomass} Default/Used value: 0.1355952	Ok	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.14 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Non CO2 emission factor arising from use of wood-fuel in project scenario Indication: EF _{pj.bio,nonco2} Units: tCO2/t _{biomass} Default/Used value: 0.1355952	OK	OK
4.15 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Non-renewability status of woody biomass fuel scenario i during year y Indication: Xnrb,bl,y Units: Fractional non-renewability Default/Used value: 0.95	OK	OK
4.16 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: CO2 emission factor arising from production of wood-fuel Indication: EF _{bio.prod,co2} Units: tCO2/t _{fuel} Default/Used value: NA	OK	OK
4.17 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: CO2 emission factor arising from use of alternative fuel Indication: EF _{af,co2} Units: tCO2/t _{fuel} Default/Used value: NA	OK	OK
4.18 Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Non-CO2 emission factor arising from use of alternative fuel Indication: EF _{af, non-co2} Units: tCO2/t _{fuel} Default/Used value: NA	OK	OK



Carbon Check's Checklist question		Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
4.19	Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: CO2 emission factor arising from production of alternative fuel Indication: EF _{af,prod,co2} Units: tCO2/t _{fuel} Default/Used value: NA	OK	OK
4.20	Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Non-CO2 emission factor arising from production of alternative fuel Indication: EF _{af,prod,non-co2} Units: tCO2/t _{fuel} Default/Used value: NA	OK	OK
4.21	Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: The mass of alternative fuel i combusted in the baseline year Indication: AF _{bl,i,y} Units: t _{fuel} /unit-year Default/Used value: 0	OK	OK
4.22	Default parameter Title: Indication: Units: Default/Used value:	/MR/ /PDD/	DR	Title: Woody biomass combustion avoided due to renewable energy fuels form in baseline year (i.e. solar cookers, agricultural residues, etc) Indication: X _{re,bl,y} Units: Fraction Default/Used value:0	OK	OK
5. Calculations						



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
5.1 Have all the calculations related to the baseline emissions been carried according to the formulae and methods described in the registered PDD and applied methodology? § 194 of CDM Project Standard and § 279 of VVS version 07.	/MR/ /Meth/	DR	Yes, all the calculations related to the baseline emission been carried out according to the formulae and methods described in the registered PDD and applied methodology.	OK	OK
5.2 Have all the calculations related to the project emissions been carried according to the formulae and methods described in the registered PDD and applied methodology?	/MR/ /Meth/	DR	As per methodological conditions, project emission not applicable.	OK	OK
5.3 Have all the calculations related to the leakage emissions been carried according to the formulae and methods described in the registered PDD and applied methodology?	/MR/ /KPTR/	DR	Yes, Leakage emission have been investigated and assessed I MR as per applied methodological condition.	OK	OK
6. Sustainability Monitoring					
6.1 Have all non-neutral indicators been monitored as per the sustainability monitoring plan?	/MR/ /GSPP/	DR	Yes, all non- neutral indicators has been monitored as per the sustainability monitoring plan. <u>Corrective Action Request No. 04</u> PP is requested to provide reason for reducing the values of Future target of parameter for "Sustainability Indicators-5" in this monitoring period (3rd) as compared to the value provided for the same parameter in 2nd Monitoring period. Moreover, the information related to these parameters is required to be updated for the corresponding monitoring period.	CAR-04	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
6.2 Have the methods to monitor data changed? And are they suitable to the project scale and type?	/MR/ /GSPP/	DR SV	No methods to monitor data are found to be changed in the current monitoring period. Methods to monitor the data in the monitoring report is cross checked from the gold standard passport, also same were verified during the site visit.	OK	OK
6.3 Has the way of monitoring been followed? With the inclusion of dates and parameters?	/MR/ /GSPP/	DR SV	Way of monitoring is being followed in the current monitoring period; same is checked during site visit from the registered PDD. Monitoring report is also in conformity with the registered PDD and actual situation at site.	OK	OK
6.4 Have mitigation measures been put in place to prevent the risk of the violation of the safe guarding principle of "Do No Harm" assessment or to neutralise a Sustainable Development Indicator that is being monitored?	/MR/ /GSPP/	DR	As per onsite verification interview with the local stakeholders (end users of stoves) it is confirmed that mitigation measures is in place to prevent the risk of violation of the safe guarding principle and mentioned sustainable development indicator being correctly monitored and found to be appropriate by the project activity. Being a type of efficient cook stove project especially in the country like Kenya is a real sustainable development program by Co2balance UK Ltd.	OK	OK
6.5 Has all the data in the Sustainability development matrix been verified and cross checked against available sources of project data? Has it been described how sustainable development would be affected if a variance occurred?	/MR/ /GSPP/	DR	Yes, all the data in the sustainability development matrix been verified and cross checked against available sources of project data.	OK	OK
7. Other					
7.1 Are there any issues from the previous validation/verification? (i.e FARs, requests/approvals for RMP)	/ValR/ /MR/	DR	No there is no FAR existing from previous verifications	OK	OK



Carbon Check's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
7.2 Has the project ever received any requests for reviews or incompletes from the UNFCCC or GS Secretariat?	/MR/ /GS/	DR	Project is a GS VER (GS 883) project and it has not received any incompleteness or review question. Same was checked from the GS website.	OK	OK
7.3 The evaluation of the status of mitigation and compensation measures has been verified.	/MR/ /PDD/ /GSPP/ /CIR/	DR SV	Yes, mitigation and compensation measures have been assessed by the verification team by means of review of GS passport, PDD, MR, GGI monitoring survey report, and on site interview with the end users of cook stoves and found to be appropriate.	OK	OK

Table 2: List of findings (CARs/CLs)

Finding	CAR 01		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	As there is no specific guidelines stipulated and mandated by Gold Standard hence PP has used UNFCCC template for monitoring report with all required information for verification and monitoring. Following findings has been raised in relation to template used for MR: 1. Template used for MR is not latest. 2. PP need to follow the UNFCCC latest Guidelines for completing the monitoring report form. 3. Sectoral scopes of applied methodology also missing. 4. In section A.1 of the MR is not as per the Guideline requirements. However, point C is missing in the section. PP is requested to revise the section.		



Finding	CAR 01
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	- As there are no specific guidelines stipulated by the Gold Standard the PP does not believe that it is a requirement to use the latest CDM template. - See response above - The PP has added the sectoral scopes of the methodology - A table including a summary of stove construction dates has been provided in section A.11
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	- OK. However the information provided on the cover page of MR is not consistent with Version 03.1 of the MR template used. It doesn't contain the following: - Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period up to 31 December 2012(if applicable). - Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period from 1 January 2013 onwards (if applicable). CAR point is not closed. - OK. - PP has revised the MR to state the sectoral scope of the applied methodology. - PP has revised the MR, and changed the format of the data i.e., DD/MM/YYYY. - Verification team are not able to find section A.11 in the MR. PP shall revise the response accordingly. CAR point not closed.
Corrective Action or clarification #2 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	- The actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period up to 31 December 2012 and during the period from 1 January 2013 onwards included in the Section E7 of MR as the version 03.1 requires. The cover page does not have a designated section for the above information: Please see: https://cdm.unfccc.int/Reference/PDDs_Forms/Issuance/iss_form07.doc - The editorial issue has been amended and subsequently the table that includes a summary of stove construction dates has been provided in section A.1.
DOE Assessment #2 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	- PP has provided the revised document and found in line with requirement of the Guidelines. Hence, CAR point is closed. - PP has updated the MR as per finding raised above. Hence, CAR point is closed.



Finding	CAR 01
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 02
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	PP is requested to provide all the links and references used in section B.1 of the MR.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The PP has provided references and links where applicable in section B.1
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has revised the section B.1 of MR and has provided references.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 03
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	PP is requested to provide all the CTFs form and the Total Distribution Records for this monitoring period to Verification team.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The distribution record documents are filed in the Nairobi office and it is therefore not possible to provide all the forms, however, the PP has provided a sample of CTFs and the TDR excel file-See CONFIDENTIAL_GS843_Distribution Record_MP3



Finding	CAR 03
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has submitted the sample of CTFs dated 06/09/2011, 15/04/2011, 02/06/2011, 05/09/2011, 10/01/2011, 11/10/2011, 15/08/2011 and 17/01/2012 and the TDR CONFIDENTIAL_GS843_Distribution Record_MP3.excel this monitoring period and same has been check during OSV and found appropriate to Verification team.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 04
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	PP is requested to provide reason for reducing the values of Future target of parameter for "Sustainability Indicators-5" in this monitoring period (3 rd) as compared to the value provided for the same parameter in 2nd Monitoring period. Moreover, the information related to these parameters is required to be updated for the corresponding monitoring period.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The future target for the parameter has been reduced to the same amount that is currently being paid out to the employees that work on the project. In the event that the PP resumes stove construction in the project area, the amount of employment and income generated is likely to increase. The sustainability analysis has already been provided and can be found in the supplementary excel spreadsheet under the sustainability indicator tab.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the descriptions about reducing the values of Future target of parameter for "Sustainability Indicators-5", which is acceptable to the verification team and has been cross check with supplementary excel spread sheet under the sustainability indicator tab. Hence, CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed



Finding	CAR 05		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	PP is requested to provide the Comparison of Fuel use data between Baseline KS and MKS in response of "Q40" in respective section of MR.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The Comparison of fuel use between the baseline KS (KS) and Monitoring Kitchen Survey (MKS) has been provided-see Table 1 p.20.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the Comparison of Fuel use data between Baseline KS and MKS in response of "Q40" in D.1 of the section of MR and same has been cross check with "Aberdares MKS Results Master Verification 3.xle".		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CAR 06		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	PP is requested to provide the Sample calculation for all formulae used with applying actual values in section E.1 and E.2 of the MR.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The exact formulas and values used in the calculation are provided in the tables in section E.1 and E.2 The actual ER calculations can be found in the supplementary data excels spreadsheet.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	OK		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		



Finding	CAR 07		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	FAR 1 (from last Verification) is converted to CAR 7: PP has described in the response CAR 5 and CL 1 that the fully operational SOP is under preparation and will be in place by the next verification. Accordingly, verification team has raised a FAR 1 raised. It involves the assessment on the preparation and execution of the fully operational SOP.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	As explained on p.25 of the MR the PP has devised a new and more robust SOP for the distribution of stoves, which will be applied to future roll outs in Aberdares.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	FAR 1 during previous verification was raised with regard to reducing the risk associated with manual data handling at three levels, which increases the risk of errors in database and ultimately affects ER estimation. Section C of MR provides description about new Standard Operating Procedure (SOP) and it states, " <i>The standard operating procedure described above will be applied to future stove roll-outs in Kisumu</i> ". It is not clear that the standard operating procedure is being used at present or not. PP is requested to provide the clear statement for the same and also submit the new SOP to verification team. Furthermore, FAR 1 also refers to execution of fully operational SOP. PP should clearly explain whether the SOP has been executed or not?		
Corrective Action or clarification #2 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The explanation provided by the PP in Section C of the MR refers to the new stove distribution SOP which has been developed in order to minimize the risk of data loss during the distribution of stoves. As no new stoves were distributed in Aberdares over the course of monitoring period 3 the SOP has not been applied in the project area as of yet, however, the new SOP is fully operational and has already been successfully implemented in a different co2balance project in Kenya. The PP has provided the SOP documents for each stage of the stove distribution procedure: forward tracking, installation and tracking.		



Finding	CAR 07
DOE Assessment #2 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP in section C of the MR clearly states that no new stoves have been distributed in Aberdares during this monitoring period, which has been verified through review of distribution records (CONFIDENTIAL_GS883_Distribution Record.xlsx) and OSV. Furthermore, PP has developed a new stove distribution SOP to minimize the risk of data loss during the distribution of stoves. The PP has also provided the SOP documents for each stage of the stove distribution i.e., forward tracking, installation and tracking. Moreover, PP has also provided the updated monitoring protocol, which is fully operational in all co2balance projects.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 08
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	FAR 2 (from last Verification) is converted to CAR 8: PP has described that the data was lost and could not submit all the documents related to the conducted trainings. However, the verification team is able to confirm that all the personnel working on the project are competent enough to conduct the efficient surveys and ensure the quality of the data. The necessary measures to avoid such data loss were not provided in the monitoring report. Hence, PP is required to demonstrate the data handling procedures and its implementation by the next verification. Thus, FAR 2 is raised.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The PP has provided the updated monitoring protocol which was developed in response to FAR 2 in order to improve the data collection procedure. Please see 'Monitoring Protocol'.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the monitoring protocol "co2balance monitoring and data collection procedure", verification team has review the documents and also did the interview of PP and other staff related to this issues and found appropriate.



Finding	CAR 08
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 09
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	FAR 3 (from last Verification) is converted to CAR 9: In the MR, PP has responded to the earlier FAR 7 raised during the verification that the PP shall conduct the efficiency tests for broken and not broken stoves during the next KPT. PP has conducted the KPT during 2012 and next KPT is due in June 2014. Thus, this is forwarded to the next verification and DOE needs to assess this FAR.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	As per the monitoring plan, the ageing KPT is carried out biennially and is therefore due to be conducted in August 2014.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	As per the FAR 3 (from the last verification) efficiency tests for broken and not broken stoves during the next KPT, which was due in June 2014. Moreover PP in his response has stated, "As per the monitoring plan, the ageing KPT is carried out biennially and is therefore due to be conducted in August 2014". As both the dates i.e., June 2014 and August 2014 have passed. PP shall now provide the efficiency tests for broken and not broken stoves i.e., ageing KPT report.
Corrective Action or clarification #2 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	In accordance with FAR 2 from the GS issuance review and in line with the monitoring plan the damaged stove assessment was scheduled for the next Ageing Stove KPT in August 2014. Considering monitoring period 3 ended in March 2014, the PP's understanding is that the KPT would therefore be assessed as part of the next monitoring period.



Finding	CAR 09
DOE Assessment #2 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	As per the FAR 3 (from the last verification) efficiency tests for broken and not broken stoves to be conducted during the next KPT, which was due in June 2014. However, the current monitoring period ends on 31/03/2013. So, the verifying DOE during next verification shall assess that efficiency tests are conducted by PP for broken and not broken stoves during the next KPT. FAR 01 is raised.
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☐ The finding is closed

Finding	CAR 10
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	On the cover page and in section E.5 of MR estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD shall be for exact number of days for the monitoring period on pro-rata basis.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	As the 3rd monitoring period covers exactly one year, the PP believes that the value on the cover page and section E.5 is correct.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	OK.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 11
---------	--------



Finding	CAR 11		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	Following parameters listed in section B.6.2 of PDD are not provided in Section D.1 of MR: 1. N_y 2. $X_{re,bl,y}$ 3. $X_{af,bl,y}$ 4. $X_{nrb,bl,y}$		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The PP has included the parameters above in section D.1 of the MR as per the PDD.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has revised the MR and included the above parameters in section D.1 of the MR.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CAR 12		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	Following parameters listed in section D.1 of MR are not provided in Section B.6.2 of the registered PDD: 1. $X_{nrb,pj,y}$		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	In line with the PDD, the parameter listed in section D.1 has been amended to $X_{nrb,bl,y}$.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Parameter listed in section D.1 has been amended and found correct.		



Finding	CAR 12
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 13
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	Value for parameter AF _{pj,i,y} (Mass of alternative fuel i combusted in the project in year y) in section D.2 of MR has been provided as N/A. PP shall explain the reason for it and correct it accordingly.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	As explained in the MR baseline kitchen surveys show that there is a certain degree of fuel and stove type mixing in the project area. In response to this the KPT was appropriately designed to measure fuel consumption of the primary fuel only (wood), while the households involved are carrying on a degree of typical fuel and stove-type mixing during the KPT itself. Therefore, any secondary fuel is treated as zero in both the baseline and the project scenarios. MKS has confirmed this scenario and continues to monitor it for significant change.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	OK.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding (FAR# 1 raised by GS during previous issuance review)	CAR 14
Classification	☒ CAR ☐ CL ☐ FAR



Finding (FAR# 1 raised by GS during previous issuance review)	CAR 14
Description of finding (DOE)	Distribution data collection included manual data handling on 3 levels (builders, their supervisors, and co2balance UK Ltd office personnel). This increases risks of errors considerably. Please reduce the level of manual data handling and transfer and improve quality checks on the collected data. This shall be applied to the next verification period.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	co2balance UK Ltd introduced a new standard operating procedure (SOP) for the distribution of stoves in order to improve data management, reduce and to minimize the risk of losing stoves. The SOP consists of three main phases are; forward tracking, installation and stove tracking. During the forward tracking phase field staff are instructed to visit households in the project area with a short questionnaire to establish which families are interested in receiving a stove. The households that request a stove are asked to fill in their details on a forward tracking sheet. Once complete, a camera phone is used to take a GPS tagged picture of the beneficiary's house so that they can be located again for installation. At the end of the day, the pictures are uploaded onto the co2balance UK Ltd FED computer system which automatically converts the GPS data and household names into an excel spreadsheet and plots the coordinates of each household on a map. This data can then be used to locate the same households for installation. The last stage of the distribution procedure involves tracking the installed stoves to ensure their location corresponds with the forward tracked stoves. After the stoves have been installed, the beneficiaries are asked to sign a carbon rights form and a GPS tagged photo is taken of the copy. After the photo of the CTF is uploaded to the FED, its GPS coordinates and contact details are compared against the corresponding forward tracking photos. Any stove inaccuracies or mistakes in data recording determined by the system must be repeated. The standard operating procedure described above will be applied to future stove roll-outs in Aberdares.



Finding (FAR# 1 raised by GS during previous issuance review)	CAR 14
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP in section C of the MR clearly states that no new stoves have been distributed in Aberdares during this monitoring period, which has been verified through review of distribution records (CONFIDENTIAL_GS883_Distribution Record.xlsx) and OSV. Furthermore, PP has developed a new stove distribution SOP to minimize the risk of data loss during the distribution of stoves. The PP has also provided the SOP documents for each stage of the stove distribution i.e., forward tracking, installation and tracking. Moreover, PP has also provided the updated monitoring protocol, which is fully operational in all co2balance projects.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding (FAR# 2 raised by GS during previous issuance review)	CAR 15
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	The PP shall study for the next KPT whether there is a difference in efficiency between broken and not broken stoves on a fuel use per person meal day basis.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The next KPT due in June 2014 will assess the difference in efficiency between damaged and non-damaged stoves as noted in FAR 2.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The next KPT is schedule for June 2014 and this monitoring period ends on 31/03/2014. So the verifying DOE during next verification shall assess that efficiency tests are conducted by PP for broken and not broken stoves during the next KPT (which was to be conducted in June 2014). FAR 01 is raised in this regard.



Finding (FAR# 2 raised by GS during previous issuance review)	CAR 15
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☐ The finding is closed

Finding (FAR# 3 raised by GS during previous issuance review)	CAR 16		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	The PP shall ensure that the Usage Survey planned for June 2014 uses the updated questionnaire and shall further clarify the usage status of 'Damaged' stoves: This shall be checked by the DOE.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The PP has used the updated questionnaire for the usage survey, which will be submitted during the next monitoring period and assessed accordingly. As noted in the previous issuance review, based on feedback from project area staff, the stoves reported as damaged only have minor chips and/or cracking which does not affect the efficiency of the stove, and the DOE has again confirmed this.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The next usage survey is schedule for June 2014 and this monitoring period ends on 31/03/2014. SO, The DOE shall verify the correct application of the revised usage survey during the next verification. FAR 02 is raised in this regard.		
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☐ The finding is closed		



Finding	CL 01		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (DOE)	PP is requested to provide the following documents: 1. A Sample copy of Contract for Distribution record information. 2. Kitchen Surveys Report (KS's) 3. Monitoring Kitchen Surveys (MKS) 4. Kitchen Performance Test (KPT's)		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The PP has provided; 1. A sample of scanned CTF 2. Baseline Report 3. Monitoring Kitchen Surveys 4. See Baseline Report for KPT results. No new KPTs have been conducted during the 3 rd Monitoring Period.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the documents i.e. A sample of scanned CTF, Baseline Report And Monitoring Kitchen Surveys. However Pending closure of CAR 09.		
Corrective Action or clarification #2 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	As explained in CAR 9, the KPT was not conducted during the 3 rd monitoring period as it was scheduled for the next ageing stove KPT in August 2014. Therefore, the PPs understanding is that it would be assessed as part of the next verification.		
DOE Assessment #2 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	FAR 01 has been raised in this regard.		
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☐ The finding is closed		

Finding	CL 02		
Classification	☐ CAR	☒ CL	☐ FAR



Finding	CL 02
Description of finding (DOE)	In section D.2 of MR, PP has used a value of 0.1355952 tCO ₂ /t _{biomass} for parameters EF _{pj.bio,co2} and EF _{bl.bio,non-co2} . These values are different from the value (0.1176 tCO ₂ /t _{biomass}) provided for the same parameter in the registered PDD. PP shall provide the reason for the same.
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	In line with the Gold Standard requirements the PP has updated the non CO ₂ emission factors by applying the latest version of GWP as provided by IPCC in section 2.10.2 of IPCC Fourth Assessment Report: Climate Change 2007 and Emission Factor value provided in Table 2.5 of Chapter 2: Stationary Emissions (2006 IPCC Guidelines for National Greenhouse Gas Inventories).
DOE Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	PP has provided the reason for changed the values from the registered PDD and same has been check with the requirement of GS and found in line.
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	FAR 01
Classification	☐ CAR ☐ CL ☒ FAR
Description of finding (DOE)	PP has responded to the CAR 09 and CL 01 raised during the verification by stating that the efficiency tests for broken and not broken stoves will be conducted during the next KPT. PP has conducted the KPT during 2012 and next KPT is due in June 2014. As this monitoring period ends on 31/03/2014 so the verifying DOE during next verification shall assess that efficiency tests are conducted by PP for broken and not broken stoves during the next KPT (which was to be conducted in June 2014).
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Noted.



Finding	FAR 01
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	FAR 02
Classification	☐ CAR ☐ CL ☒ FAR
Description of finding (DOE)	The verifying DOE shall verify the correct application of the revised usage survey during the next verification.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☐ The finding is closed



Appendix D

Certificates of Competence



Carbon Check (Pty) Ltd

Amit Anand

is hereby certified as a qualified

Assessor
Lead Assessor
Technical Reviewer
Technical Expert for Technical Area
1.2; 13.1

*with Carbon Check (Pty) Ltd, under the regulations of the
UNFCCC and Carbon Check's qualification criteria .*

Approval date: 15 November 2013



Technical Executive
Mr Vikash Kumar Singh



Executive Director
Mr Priyesh Ramlall

The above competence is valid for one year from the date of approval and is subject to review as per changes in CCL and UNFCCC requirements and procedures.



Carbon Check (Pty) Ltd

Barun Kumar

is hereby certified as a qualified

Assessor
Technical Expert

In the following Technical Areas

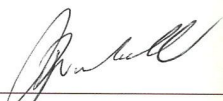
1.2; 3.1; 13.1

*with Carbon Check (Pty) Ltd, under the regulations of the
UNFCCC and Carbon Check's qualification criteria .*

Approval date: 31 January 2014



Chief Executive Officer
Mr Adam Simcock



Executive Director
Mr Priyesh Ramlall

The above competence is valid for one year from the date of approval and is subject to review as per changes in CCL and UNFCCC requirements and procedures.



Carbon Check (Pty) Ltd

Pankaj Kumar

is hereby certified as a qualified

Assessor

Lead Assessor

Technical Expert

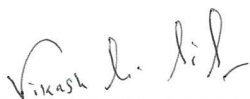
Technical Reviewer

In the following Technical Areas

1.1; 1.2; 3.1; 4.n (Pulp and Paper); 13.1

*with Carbon Check (Pty) Ltd, under the regulations of the
UNFCCC and Carbon Check's qualification criteria .*

Approval date: 15 November 2013



Technical Executive
Mr Vikash Kumar Singh



Executive Director
Mr Priyesh Ramlall

The above competence is valid for one year from the date of approval and is subject to review as per changes in CCL and UNFCCC requirements and procedures.



Adam Simcock

is hereby certified as a

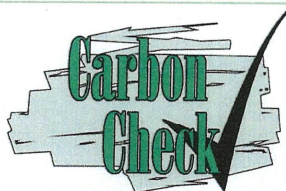
Local Expert

With Carbon Check (Pty) Ltd under the regulations of the UNFCCC and
Carbon Checks qualification criteria for the following countries:
South Africa, Kenya, Mozambique, Ghana, Malawi, Ghana, Namibia,
Zambia, Madagascar

Awarded: April 2013



Priyesh Ramlall
Carbon Check



Carbon Check (Pty) Ltd

Anubhav Dimri

is hereby certified as a qualified

Assessor

Lead Assessor

Technical Expert

Technical Reviewer

In the following Technical Areas

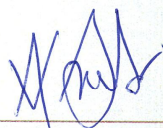
1.2; 3.1; 13.1

with Carbon Check (Pty) Ltd, under the regulations of the
UNFCCC and Carbon Check's qualification criteria .

Approval date: 08 September 2014



Technical Executive
Mr Amit Anand



Chief Executive Officer
Mr Adam Simcock

The above competence is valid for one year from the date of approval and is
subject to review as per changes in CCL and UNFCCC requirements and
procedures.



Carbon Check (Pty) Ltd

Ramchandra Nesari

is hereby certified as a qualified

Assessor
Technical Expert
Technical Reviewer

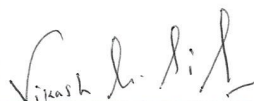
In the following Technical Areas

1.1; #4n; 5.1

Fuel Switch measure in Industrial Facility an Waste Recovery projects

with Carbon Check (Pty) Ltd, under the regulations of the
UNFCCC and Carbon Check's qualification criteria .

Approval date: 15 November 2013



Technical Executive
Mr Vikash Kumar Singh



Executive Director
Mr Priyesh Ramlall

The above competence is valid for one year from the date of approval and is
subject to review as per changes in CCL and UNFCCC requirements and
procedures.