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SUSTAINABILITY VERIFICATION REPORT

For the GS Program of Activity

Qori Q´oncha-Improved Cookstoves Diffusion Programme in Peru

In

Peru

Report No. 01 996 9105080524

Version No. 03, 2015-04-24

Designated Operational Entity (DOE)

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I. Project data:

Project title:	Qori Q´oncha Improved Cookstoves Diffusion Programme in Peru.		**Report No.:** 01 996 9105080524	
Version of GS rules:	2.2		**Version No.:** 03	
Monitoring period:	Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD- DD 1; 4th monitoring period: 14/05/2013-10/08/2014. Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD- DD 2; 3rd monitoring period: 14/05/2013-10/08/2014 Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD- DD 3; 2nd monitoring period: 14/05/2013-10/08/2014		**Date of current revision:** 2015-03-24	
Methodology:	GS "Methodology for Improved Cookstoves and Kitchen Regimes – V.01"		**Date of first issue:** 2014-08-19	
Registration detail	CDM/JI reference No.: N/A		GS ID: PoA 1005 VPA 1 I.D: GS 685 VPA 2 I.D: GS 1049 VPA 3 I.D: GS 1385	
Uploading of MR:	The GS monitoring report for: Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD- DD 1; 4th monitoring period, version 5, 05/03/2015, Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 2; 3rd monitoring period, version 5, 05/03/2015. Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 3; 2nd monitoring period, version 6, 05/03/2015)			
Average emission reductions:	Estimated:	Qori Q'oncha – Improved Diffusion Programme in Peru – VPA- DD 1; 4th monitoring period: 29,182 tCO_2e from 14/05/2013-10/08/2014, including both days, as indicated in the registered GS-VPA- DD (version 9, dated 11-01-2011). Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 2; 3rd monitoring period: 23,738 tCO_2e from 14/05/2013-10/08/2014, including both days, as indicated in the registered GS-VPA- DD (version 6, dated 27/03/2012). Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 3; 2nd monitoring period: 48,370 tCO_2e from 14/05/2013-10/08/2014 As indicated in the registered GS-VPA- DD (version 8, dated 08-	Verified:	Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 1 (version 5); 4th monitoring period: 83,076 tCO_2e from 14/05/2013-10/08/2014, including both days. Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 2 (version 05); 3rd monitoring period: 245,608 tCO_2e from 14/05/2013-10/08/2014, including both days. Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 3 (version 04); 2nd monitoring period: 65,094 tCO_2e from 14/05/2013-10/08/2014. Total: 393,778 tCO_2

		11-2013).		
GHG reducing measure/technology:	This VPA aims to coordinate actions to disseminate the use of improved cooking stoves (ICS), with chimneys to replac the less efficient and health damaging "fogon" in the Republic of Peru. The ICS would contain the GHGs emission, improve air quality and thus generate a better in-house environment for the end-users.			

Party	Project participants	Party considered a project participant	Contract party
Peru(Host)	Instituto Trabajo y Familia (ITYF)- (VPA- DD1, VPA-DD2, VPA- DD3)	No	☐
Peru(Host)	Properu – (VPA- DD1) (not part of this verification)	No	☐
Peru(Host)	ADRA Perú (not part of this verification) (VPA-DD 1)	No	☐
Switzerland	My climate (VPA-DD 1)	No	☐
Peru(Host)	Gobierno Regional de Moquegua (GRM) – (VPA-DD2)	No	☐
Switzerland	Care Perú (not part of this verification)	No	☐
Peru(Host)	Gobierno Regional de Arequipa (GRA) – (VPA- DD3)	No	☐
Peru(Host)	Gobierno Regional de La Libertad (GRLL) – (VPA-DD3)	No	☐
Peru(Host)	Gobierno Regional de Tacna (GRT) – (VPA- DD3) (Not part of this verification)	No	☐
France	Microsol – (VPA- DD1, VPA- DD 2, VPA- DD3)	No	☒

II. Verification Team:

Verification Team			Role									
Full name	**Affiliation TÜV Rheinland**	**Appointed for Sectoral Scopes (Technical Areas)**	Team leader	Acting Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
Arturo Lemus	México	1.2,13.1	**X**									
Jaime Ramos	México	1.2,5.1				**X**						
Danae Diaz	México	1.2,13.1, 13.2								**X**		
Gonzalo Sandoval	México	1.2, 3.1					**X**					
Jasmine Liu	China	1.2, 3.1									**X**	

Verification Phases	Verification Status
☒ Desk Review ☒ Follow up interviews ☒ Resolution of outstanding issues ☒ Corrective Actions / Clarifications Requested	☒ Full Approval and Submission for Issuance ☐ Rejected

III. Verification Report:

Final approval	Released	Distribution
☒	**By: Mr. Henri Phan**	☐ No distribution without permission from the Client or responsible organizational unit ☒ Unrestricted distribution
Date: 2015-04-24		

Abbreviations

BE_y	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM VVS	CDM Validation and Verification Standard
CE	European Conformity
CEF	Carbon Emission Factor
CH_4	Methane
CL	Clarification request
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GS	Gold Standard
GSF	Gold Standard Foundation
ICS	Improved cookstove
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PE_y	Project Emissions
ROHS	Restriction of Hazardous Substances
SD	Sustainable Development
UNFCCC	United Nations Framework Convention on Climate Change
VER	Voluntary Emission Reduction

Verification opinion — summary

The verification team assigned by the DOE (TÜV Rheinland (China) Ltd.) concludes that the GS-CDM Program of Activity "Qori Q' oncha – Improved Cookstoves Diffusion Programme in Peru", in Peru as described in the registered PoA-DD (version 9, 11/01/2011) and monitoring reports:

QQ VPA1 - MR - MP4 - v5, dated on 05/03/2015
QQ VPA2 - MR - MP3 - v7, dated on 05/03/2015
QQ VPA3 - MR - MP3 - v6, dated on 05/03/2015

,meets all relevant requirements of the Gold Standard rules. This monitoring period/verification related to the VPA- DDs of GS:
"Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 1" GS Ref. No. 685.
"Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 2" GS Ref. No. 1049.
"Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 3" GS Ref. No. 1385.

GS-CDM/JI/VER project verification methodology and process

The verification has been performed as described in the Chapter 4 of Gold Standard Toolkit version 2.2 and constitutes the following steps:

- Uploading the GS monitoring report including carbon and sustainability monitoring reports onto the GS Registry

- Desk review of the monitoring report and the relevant documents

- On-site assessment (12/08/2014 – 15/08/2014)

- Issuance of Verification Report

The project activity was correctly implemented according to selected monitoring methodology (ies), and the registered PDD and GS passport. The monitoring equipment was installed, calibrated and maintained with serious failures/in a proper manner, while collected monitoring data allowed to verify the amount of achieved GHG emission reductions. The DOE therefore is pleased to issue a positive verification opinion expressed in the attached Certification statement.

TABLE OF CONTENTS

1. INTRODUCTION 7
1.1 Objective 7
1.2 Scope 7

2. METHODOLOGY 8
2.1 Desk review 8
2.2 On-site visit and follow-up interviews with project stakeholders 12
2.3 Resolution of outstanding issues 17
2.4 Internal quality control 18
2.5 Verification Team 18

3. VERIFICATION FINDINGS 19
3.1 Project implementation 19
3.2 Compliance of the monitoring plan with the monitoring methodology including applicable tool(s). 25
3.3 Compliance of the Actual monitoring with monitoring plan in the PoA-DD and GS passport 26
3.4 Assessment of data and calculation of greenhouse gas emission reductions 43
3.5 Issues remaining from the validation/previous verification period 53
FARs raised from previous verification were addressed correctly, as follows: 53
3.6 Status of implementation of continuous input/ Grievance mechanism & feedback received 54

Appendix A: Verification Protocol
Appendix B: Certification statement
Appendix C: Certificates of Competence

1. Introduction

The company Microsol SAS has commissioned the DOE TÜV Rheinland (China) Ltd. to perform a verification of the "Qori Q' oncha – Improved Cook stoves Diffusion Programme in Peru", in Peru (hereafter "project activity"). This report summarises the findings of the verification of the project, performed on the basis of Gold Standard rules. Verification is required for all registered VER project activities intending to confirm their achieved emission reductions and proceed with request for issuance of VER and sustainable development benefits.

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 and sustainable development benefit that have occurred as a result of the registered GS project activity during a defined 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 and sustainable development benefit reported for the "Qori Q' oncha – Improved Cook stoves Diffusion Programme in Peru", in Peru for the period:

Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 1 -14/05/2013 to 10/08/2014.
Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 2- 14/05/2013 to 10/08/2014.
Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA- DD 3- 14/05/2013 to 10/08/2014.

The purpose of verification is to review the monitoring results and verify that monitoring methodology was implemented according to monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner.
In particular, monitoring plan, monitoring report and the project's compliance with relevant GS and host party criteria are verified in order to confirm that the project has been implemented in accordance with the monitoring plan and approved monitoring methodology.

In particular, monitoring plan, monitoring report and the project's compliance with relevant GS and host Party criteria are verified in order to confirm that the project has been implemented in accordance with the monitoring plan.

1.2 Scope

The scope of the verification is:

- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- 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 sustainability indicators are sufficiently supported by evidence.
- Where sampling in involved, sampling guidelines are applied to ensure the adequate sampling and survey method is followed in reaching professional judgements.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified. The verification comprises a review of the monitoring reports over the next monitoring period:

Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 1 -14/05/2013 to 10/08/2014.

Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2- 14/05/2013 to 10/08/2014,
Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3- 14/05/2013 to 10/08/2014,

based on the monitoring plan and GS passport, emission reduction calculation spreadsheet, monitoring methodology/ies and all related evidence provided by project participant(s).
On-site visit and stakeholders interviews are also performed as part of the verification process.

2. Methodology

The verification consists of the following four phases:
1. Completeness check and upload the Monitoring report to GS registry;
2. Desk review of the monitoring plan, monitoring report, monitoring methodology, project design document, GS passport and other relevant documents;
3. On-site visit (including follow-up interviews with project stakeholders, when deemed necessary). The on-site assignment includes the following;
   - An assignment of installation, implementation and operation of project activity with respect to registered VPA- DD.
   - Review of information flows for generating, aggregating and reporting the monitoring parameters;
   - Interview with relevant personals 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.
   - To verify the monitoring of the sustainable development indicators.
   - To assess the impact and contribution of project activities to sustainable development.
4. Resolution of outstanding issues and the issuance of the final Verification report and Certification statement.

The following sections outline each step in more detail.

2.1 Desk review

The following table outlines the documentation reviewed during the verification:

Ref no.	*Reference Document*
/1/	GS Initial Monitoring report, Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 1; 4th monitoring period (version 1, 01-08-2014) Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2; 3rd monitoring period (version 1, 01-08-2014) Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3; 2nd monitoring period (version 1, 01-08-2014)
/2/	Final GS Monitoring report, Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 1; 4th monitoring period (version 5, 05-03-2015) Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2; 3rd monitoring period (version 7, 05/03/2015)

	Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3; 2nd monitoring period (version 6, 05/03/2015)
/3/	TUV Nord, "GS Verification report No: 8000421097", dated on 2013-12-24
/4/	Registered PoA-DD, registration no. 1005, "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 1" GS Ref. No. 685. "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2" GS Ref. No. 1049. "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3" GS Ref. No. 1385.
/5/	Emission reduction calculation spread sheet (First Version): "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 1" : ITYF1 - ER calculation - v1 "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2" : ITYF2 - ER calculation - v1 "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3" : ITYF3 - ER calculation - v1 "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2" : GRM - ER calculation – v1 "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3" : GRLL - ER calculation – v1 "Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3" : GRA - ER calculation – v1
/6/	The Gold Standard, "Indicative Programme, Baseline, and Monitoring Methodology for Improved Cook-stoves and Kitchen Regimes" V.01 http://www.goldstandard.org/wp-content/uploads/2011/11/GS_Methodology_Cookstove.pdf The Gold Standard, "Indicative Programme, Baseline, and Monitoring Methodology for Improved Cook-stoves and Kitchen Regimes" V.02 http://www.goldstandard.org/wp-content/uploads/2011/11/V02_08-02-10_GS_Cook-stove_Methodology.pdf
/7/	Microsol, "ITYF1, ER calculation V5" No dated. Information used in VPA1
/8/	Microsol, "ITYF1, Beneficiaries list" No dated. VPA 1
/9/	Microsol, "Surveys's information" for VPA1. Belong to the next districts located at "La Libertad" region: Usquil, Sartiamba, Salpo, Marcabal, Julcan, Huaranchal, Huarachuco, Calamarca. It includes survey's scans and processed information.
/10/	Microsol, "Maintenance records" files included : "General list and surveys scan"
/11/	Microsol, "ITYF2, ER calculation V6" No dated. VPA2
/12/	Microsol, "Surveys's and Scans" for VPA2. Surveys were raised in the next regions: Cajamarca, Huacavelica, Moquegua and Piura
/13/	Microsol, "ITYF3, ER calculation V4" No dated. VPA 3
/14/	Microsol, "Surveys's and Scans" for VPA3. Surveys were raised in the next regions: Huanuco, Arequipa and la Libertad
/15/	Gold Standard Foundation, "Mail – Monitoring kitchen survey (KS)" " E-mail dated on 29/04/2011, from the Head of Capacity Building/Regional Manager Americas, that explain according to GS that: "It is not necessary to monitor this parameter every three months but before verification"…

/16/	Gold Standard Foundation, "Mail – Verification request for the use of GS New meth rule 90/30" dated on 28/06/2011" from the Regional Manager of Americas that explain that "The average value instead of margins (lower and upper) can be used. Calculations shall be review to confirm that are as per new approach " This rule is included in the GS methodology "Technologies and practices to Displace Descentralized Thermal Energy Consumption" dated on 11/04/2011.
/17/	Gold Standard Foundation, "Mail – question on new NRB methodology use for Qori Q'oncha" dated on 07/08/2014 from Regional Manager of Americas. The mail explains that "Calculation of NRB parameter, as per UNFCCC methodology AMS II G is acceptable".
/18/	Manufacturer specification for scale and commercial brochure. Brand "Constant" Manufacturer "Shenzhen Shengercheng Technological Co., Ltd. Capacity: 40 kg Division: 10 g Equipped with strain gauge sensor Standard CE,FCC,ROHS
/19/	Microsol, "QQ Management system", No dated.
/20/	Microsol, "GRM- ER calculation v5" Not dated. VPA3
/21/	Microsol, "GRA, ER calculation v4" Not dated. VPA 3
/22/	Microsol, "GRLL, ER calculation v6" Not dated. VPA 3
/23/	Microsol, "ITYF1 - Beneficiaries list", Not dated VPA1
/24/	Microsol, "ITYF2 - Beneficiaries list", Not dated VPA2
/25/	Microsol "GRM – Beneficiaries list", Not dated VPA 2
/26/	Microsol, "ITYF3 - Beneficiaries list", Not dated VPA3
/27/	Microsol, "GRA - Beneficiaries list", Not dated VPA3
/28/	Microsol, "GRLL - Beneficiaries list", Not dated VPA3
/29/	Microsol- Instituto de trabajo y familia, "ITYF- Carbon revenues use report"- Accounting information regarding the latest issuance of carbon credits.
/30/	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Tables 1.2/1.4 http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf
/31/	2006 Guidelines for National greenhouse Gas Inventories, Vol. 2, Ch. 2, Table 2.5 http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf
/32/	For global warming potentials: IPCC Fourth Assessment Report: Climate Change 2007, Table 2.14: http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html#table-2-14
/33/	Instituto de trabajo y familia, "ITYF1, ITYF2 and ITYF3- List of workers" Dated and sealed on 27/03/2013
/34/	Microsol, "QQ sampling procedure", not dated.
/35/	Microsol, "QCQQ_PSKT-KT_final" Latest and updated database to be used in order to register results to surveys, make calculations and analyzed the results. Not dated.
/36/	Microsol, "Guideline Quality Control Excel File". Version B.B-18/11/2013
/37/	Microsol, "Guidelines for Double-counting process" Dated on 08/13/2014. Powered by Bizagi Modeler. http://www.bizagi.com/en/bpm-suite/bpm-products/modeler
/38/	Microsol, "QQ verification", training provided to surveyors to correctly perform interviews, fill the data and report.
/39/	Microsol, "*Puntos clave KS y KT supervisor y encuestador*"-"key points KS and KT supervisor and

	surveyor".
/40/	Microsol, "*Monitoreo QQ- PSKS PSKT version larga*", "Monitoring QQ- PSKS PSKT long version", not dated.
/41/	Government of Arequipa, "*Programa de instalación de cocinas mejoradas en la región Arequipa*" – "Program of commissioning of improved stoves in the Arequipa region" Brochure released in 2011-2012.
/42/	Government of Arequipa, "Recomendaciones para el uso y mantenimiento de la cocina mejorada" – "Improved stoves: use and maintenance ". Not dated.
/43/	UNFCCC, "CDM validation and verification standard" Appendix 1. Calibration https://cdm.unfccc.int/filestorage/e/x/t/extfile-20140624190900494-accr_stan02.pdf/accr_stan02.pdf?t=SnB8bmJxc2k0fDBFFFNsNkUpOac7eI6qbbBL
/44/	Monitoring Report from former verification: QQ VPA1 - MR - MP3 - v4 dated on 31.10.2013 QQ VPA2 - MR - MP2 - v4 dated on 31.10.2013 QQ VPA3 - MR - MP1 - v6 dated on 31.10.2013
/45/	UNFCCC, "Guideline on the application of materiality in verifications" (Version 01.0) https://cdm.unfccc.int/Reference/Guidclarif/iss/iss_guid08.pdf
/46/	Gold Standard Foundation, "Mail confirming that all changes included in the PoA are accepted by GS" Dated on 22/10/2014
/47/	Gold Standard Foundation, "Approval of design change. It is approved to implement 9000 additional ICS as part of the design change. Dated on 08/10/2012
/48/	Gobierno regional de Arequipa, "GRA- List of workers" Dated and sealed on June 2014
/49/	Gobierno Regional de La Libertad, "GRLL –List of workers" Dated and sealed on 11/0472013
/50/	Gobierno Regional de Moquegua, "GRM – List of workers" No dated.

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

TÜV Rheinland verification team carried out an on-site visit dated on 12/08/2014 to 15/08/2014 and performed interviews with the project representatives and stakeholders.
Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

	Date	Name	Organization	Topic
/i/	12-15/08/2014	Arthur Laurent	General manager/Microsol	Implementation of project activity. Management of PoA.
/ii/	12-15/08/2014	Franklin Meléndez Alvarado	Regional Coordinator La Libertad / Instituto Trabajo y Familia (Private entity) Pro Peru (Private Entity)	Implementation of project activity. Management of PoA.
/iii/	12-15/08/2014	Edwin Villajulca Rodríguez	Provincial Coordinator Chota Community	Implementation of project activity. Management of PoA.
/iv/	12-15/08/2014	Edwin Romell Sebastián Sarobio	District Coordinator Paraiso Community	Implementation of project activity. Management of PoA.
/v/	12-15/08/2014	Samuel Ruiz Burga	District Coordinator Puente Piedra Community	Implementation of project activity. Management of PoA.
/vi/	12-15/08/2014	Oscar Ruiz	IT Responsible/ Microsol	Data base
/vii/	12/08/2014	Santos Orlando García Rosas	Beneficiary of Chota Community DNI number: 19036195	Survey /Implementation of project activity.
/viii/	12/08/2014	Agustin Lorgio Rafael García	Beneficiary of Chota Community DNI number: 19024428	Survey /Implementation of project activity.
/ix/	12/08/2014	Maria Aurora Reyes Rubio	Beneficiary of Chota Community DNI number: 43932760	Survey /Implementation of project activity.
/x/	12/08/2014	Bernarvina Juarez Gómez	Beneficiary of Chota Community DNI number: 19022723	Survey /Implementation of project activity.
/xi/	12/08/2014	Maria Angelita Zavaleta Rosas	Beneficiary of Chota Community DNI number: 46312800	Survey /Implementation of project activity.
/xii/	12/08/2014	Anastacio Rosas Cruz	Beneficiary of Chota Community DNI number: 19089136	Survey /Implementation of project activity.
/xiii/	12/08/2014	Prospero Rosas Valdivieso	Beneficiary of Chota Community DNI number: 19035994	Survey /Implementation of project activity.
/xiv/	12/08/2014	Elvia Janet García Rosas	Beneficiary of Chota Community DNI number: 19102649	Survey /Implementation of project activity.

/xv/	13/08/2014	Rosas Valdiviezo Octavio Agapito	Beneficiary of Chota Community DNI number: 19036340	Survey /Implementation of project activity.
/xvi/	13/08/2014	Lujan Gimenez Elmer	Beneficiary of Chota Community DNI number: 19055814	Survey /Implementation of project activity.
/xvii/	13/08/2014	Gilmer Usberto García García	Beneficiary of Chota Community DNI number: 19087234	Survey /Implementation of project activity.
/xviii/	13/08/2014	Ever Zarate García	Beneficiary of Chota Community DNI number: 41789807	Survey /Implementation of project activity.
/xix/	13/08/2014	Juan Reyes Rubio	Beneficiary of Chota Community DNI number: 43993808	Survey /Implementation of project activity.
/xx/	13/08/2014	Roger Juarez Rosas	Beneficiary of Chota Community DNI number: 40343035	Survey /Implementation of project activity.
/xxi/	13/08/2014	Salinas Rosas Pablo	Beneficiary of Chota Community DNI number: 40242922	Survey /Implementation of project activity.
/xxii/	13/08/2014	Graciela Rosas Salinas	Beneficiary of Chota Community DNI number: 19024066	Survey /Implementation of project activity.
/xxiii/	13/08/2014	Julio García Valdivieso	Beneficiary of Chota Community DNI number: 19022795	Survey /Implementation of project activity.
/xxiv/	13/08/2014	Maura Catalina Valdivieso	Beneficiary of Chota Community DNI number: 19027796	Survey /Implementation of project activity.
/xxv/	13/08/2014	Maria Lucia Valdivieso Juarez	Beneficiary of Chota Community DNI number: 19022772	Survey /Implementation of project activity.
/xxvi/	13/08/2014	Tomás Garcia Aureliano	Beneficiary of Chota Community DNI number: 40810670	Survey /Implementation of project activity.
/xxvii/	13/08/2014	Sebastian Rosas Cruz	Beneficiary of Chota Community DNI number: 19090293	Survey /Implementation of project activity.
/xxviii/	13/08/2014	Martha Varas Bacilio	Beneficiary of Chota Community DNI number: 19101835	Survey /Implementation of project activity.

/xxix/	13/08/2014	Bernardo Mariano Gonzalez	Beneficiary of Chota Community DNI number: 190228085	Survey /Implementation of project activity.
/xxx/	13/08/2014	Guzman Bazan Orlinda	Beneficiary of Community DNI number: 45111253	Survey /Implementation of project activity.
/xxxi/	13/08/2014	Alvaro Espinola Guzman	Beneficiary of Paraiso Community DNI number: 19091094	Survey /Implementation of project activity.
/xxxii/	14/08/2014	Julian Cesar Blas	Beneficiary of Paraiso Community DNI number: 19036685	Survey /Implementation of project activity.
/xxxiii/	14/08/2014	Patrocinio Tomás Ventura Flores	Beneficiary of Paraiso Community DNI number: 19035394	Survey /Implementation of project activity.
/xxxiv/	14/08/2014	Domitila Morales Juares	Beneficiary of Paraiso Community DNI number: 43231230	Survey /Implementation of project activity.
/xxxv/	14/08/2014	Felix Saavedra Blas	Beneficiary of Paraiso Community DNI number: 19034530	Survey /Implementation of project activity.
/xxxvi/	14/08/2014	Martha Isabel Salirosas Haro	Beneficiary of Paraiso Community DNI number: 19036359	Survey /Implementation of project activity.
/xxxvii/	14/08/2014	Eusebia Morales Juarez	Beneficiary of Paraiso Community DNI number: 80444460	Survey /Implementation of project activity.
/xxxviii/	14/08/2014	Agustina Zavaleta Chavez	Beneficiary of Paraiso Community DNI number: 19036115	Survey /Implementation of project activity.
/xxxix/	14/08/2014	Luis Cueva Josias	Beneficiary of Paraiso Community DNI number: 43367645	Survey /Implementation of project activity.
/xl/	14/08/2014	Loyaga Barreto Carmen Jesus	Beneficiary of Paraiso Community DNI number: 19036015	Survey /Implementation of project activity.
/xli/	14/08/2014	Gamboa Barreto Alvaro	Beneficiary of Paraiso Community DNI number: 191022648	Survey /Implementation of project activity.

/xlii/	14/08/2014	Gloria Elcida Salirosas Blas	Beneficiary of Paraiso Community DNI number: 44121965	Survey /Implementation of project activity.
/xliii/	14/08/2014	Margot Dorlisa Meléndez Alvarado	Beneficiary of Paraiso Community DNI number:19036562	Survey /Implementation of project activity.
/xliv/	14/08/2014	Felix García Romero	Beneficiary of Puente Piedra Community DNI number: 19520109	Survey /Implementation of project activity.
/xlv/	14/08/2014	Benito Araujo Reyes	Beneficiary of Puente Piedra Community DNI number: 19523221	Survey /Implementation of project activity.
/lvi/	14/08/2014	Luis Polo Monzón	Beneficiary of Puente Piedra Community DNI number: 40275270	Survey /Implementation of project activity.
/xlvii/	14/08/2014	Lucila Sandoval Vargas	Beneficiary of Puente PiedraCommunity DNI number: 41577551	Survey /Implementation of project activity.
/xlviii/	14/08/2014	Anticona Flores Trinida	Beneficiary of Puente Piedra Community DNI number: 19532380	Survey /Implementation of project activity.
/xlix/	14/08/2014	Roger Castillo Paredes	Beneficiary of Puente Piedra Community DNI number: 43006277	Survey /Implementation of project activity.
/l/	14/08/2014	Pedro Alberto Contreras Reyes	Beneficiary of Puente Piedra Community DNI number: 41696085	Survey /Implementation of project activity.
/li/	15/08/2014	Juan Arce Julca	Beneficiary of Puente Piedra Community DNI number: 19557457	Survey /Implementation of project activity.
/lii/	15/08/2014	Roger Raúl Sandoval Polo	Beneficiary of Puente Piedra Community DNI number: 48199082	Survey /Implementation of project activity.
/liii/	15/08/2014	Samuel Sandoval Villanueva	Beneficiary of Puente Piedra Community DNI number: 42291023	Survey /Implementation of project activity.
/liv/	15/08/2014	Teofila Araujo Uriola	Beneficiary of Puente Piedra Community DNI number: 19525046	Survey /Implementation of project activity.

/lv/	15/08/2014	Leandro Mauricio Araujo	Beneficiary of Puente Piedra Community DNI number: 42118842	Survey /Implementation of project activity.
/lvi/	15/08/2014	Segundo Juarez García	Beneficiary of Puente Piedra Community DNI number: 19557369	Survey /Implementation of project activity.
/lvii/	15/08/2014	Salinas Vilco Nilo	Beneficiary of Puente Piedra Community DNI number: 19561837	Survey /Implementation of project activity.
/lviii/	15/08/2014	Beatriz Salinas de Vilca	Beneficiary of Puente Piedra Community DNI number: 19527690	Survey /Implementation of project activity.
/lix/	15/08/2014	Julia Ruiz Rodriguez	Beneficiary of Puente Piedra Community DNI number: 43329439	Survey /Implementation of project activity.
/lx/	15/08/2014	Ariana Rios Reyes	Beneficiary of Puente Piedra Community DNI number: 36464478	Survey /Implementation of project activity.
/lxi/	15/08/2014	Santos Marquina Morilios	Beneficiary of Puente Piedra Community DNI number: 19561340	Survey /Implementation of project activity.
/lxii/	15/08/2014	Lidia Mauricio Gamboa	Beneficiary of Puente Piedra Community DNI number: 44399601	Survey /Implementation of project activity.
/lxiii/	15/08/2014	Mauricio Cerna Jacinto	Beneficiary of Puente Piedra Community DNI number: 19528548	Survey /Implementation of project activity.
/lxiv/	15/08/2014	Benita Santos Contreras	Beneficiary of Puente Piedra Community DNI number: 43349379	Survey /Implementation of project activity.
/lxv/	15/08/2014	Maria Salinas de la Cruz	Beneficiary of Puente Piedra Community DNI number: 45370785	Survey /Implementation of project activity.

Verification Team along with on-site observation, objective evidence collections, data generation and recording analysis also considered the views obtained in these interviews while arriving at Verification Opinion.

2.3 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 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 actual project activity against identified criteria.
The verification protocol serves the following purposes:

- It organises in a table form, details and clarifies the requirements, which GS-CDM/JI/VER project is expected to meet;
- 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 three 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 and preliminary and final opinion of the DOE on every particular requirement. Table 3 reflects the carry 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/JI/VER criteria and GS rules 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;
(c) 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 GS-CDM/JI/VER 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 GS-CDM/JI/VER requirements for issuance.

2.4 Internal quality control

The final verification report underwent a technical review by a qualified independent reviewer before requesting issuance of the project activity. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for GS-CDM/JI/VER validation and verification that meets the criteria of EB guidelines and GS rules for qualification.

2.5 Verification Team

Before the assessment begins, members of the verification team are ensured to cover the technical area(s), sectoral scope(s) and relevant host country experience including local language ability for evaluating the GS-CDM/JI/VER verificaiton activity. The qualification of the team is as per the criterias defined by the EB guidelines and GS rules for qualification. **Verification Team**	**Type of Involvement**

Full name	Affiliation TÜV Rheinland	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
Arturo Lemus	México	1.2,13.1	X		X				
Jaime Ramos	México	1.2,5.2		X		X			
Danae Diaz	México	1.2,13.1, 13.2							X
Gonzalo Sandoval	México	1.2, 3.1					X		
Jasmine Liu	China	1.2, 3.1					X		

3. Verification findings

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

3.1.1 The implementation of the project activity

Project Participants VPA 1	*Instituto Trabajo y Familia (ITYF)* *Properu (not part of this verification)* *ADRA Perú (not part of this verification)* *Microsol S.A.R.L.* *My climate*
Project Parties VPA2:	*Peru (Non.Annex 1 country)* *France, Switzerland (Annex 1 Country)*
Project Participants VPA 2	*Instituto Trabajo y Familia (ITYF)* *Gobierno Regional de Moquegua- (GRM)* *Care Perú (not part of this verification)* *Microsol S.A.R.L.* *Myclimate*
Project Parties VPA 2	*Peru (Non.Annex 1 country)* *France(Annex 1 Country)*
Project Participants VPA 3	*Instituto Trabajo y Familia - (ITYF)* *Gobierno Regional de Arequipa- (GRA)* *Gobierno Regional de La Libertad - (GRLL)* *Gobierno Regional de Tacna - (GRT) (not part of this verification)* *Microsol S.A.R.L.*
Project Parties VPA 3:	*Peru (Host Country)* *France(Annex 1 Country)*
Title of project activity:	*Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru*
GS registration No:	*1005*
Baseline and monitoring methodology:	*Indicative Programme, Baseline, and Monitoring Methodology for Improved Cook-stoves and Kitchen Regimes V.01 /6/*
Project Type:	*Renewable thermal energy*
Project Scale:	*Large Scale*
Location of the PoA and VPA-DD:	*The PoA is located in the Peru - Host County* *VPA-DD1 is implemented at Otuzco, Sánchez Carrión and Julcan*

	provinces; region of "La Libertad". *VPA-DD2 is implemented at:* *1) Celendin province; which belongs to Cajamarca region;* *2) Acobamba, Angaraes and Castrovireyna provinces, which are part of Huancavelica Region.* *3) Mariscal Nieto, General Sánchez Cerro, Pataz and Sanchez Carrion provinces, all located at Moquegua region; and* *4) Ayabaca and Huancabamba provinces, which belong to Piura region.* *VPA-DD3 is implemented at:* *1) Dos de Mayo region, located at the Huánuco region.* *2) Caylloma, Caraveli, Camaná, Islay, Castilla, Condesuyos, Arequipa and La Unión , located at Arequipa región; and* *3) Bolivar, Gran Chimu, Pataz and Sanchez Carrion provinces, which belong to La Libertad región.*
Project's crediting period:	*VPA- DD 1 -15/11/2008 to 14/11/2015.* *VPA- DD 2- 20/03/2010 to 19/03/2017.* *VPA- DD 3- 14/05/2011 to 13/05/2018.*
Total Duration of the project:	*7 years (renewal twice)*
Period verified in this verification:	*VPA- DD 1 -14/05/2013 to 10/08/2014.* *VPA- DD 2- 14/05/2013 to 10/08/2014.* *VPA- DD 3- 14/05/2013 to 10/08/2014.*

The PoA consists in replacing the three stone or terra cota "fogon" constructed by beneficiaries with local material, by an improved cookstove. Improved cooking stoves have an average life time of 7 years.

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 registered PoA, associated VPA-DDs and improvements requested by the GS.

The complete CPAs (ID and titles) covered by this monitoring period are described in the below table; information was verified by the DOE during the desk review.

Table 3.3.1-1

Number	ID (ref. number)	Starting date of the crediting period	CPA title	Implementation status in the monitoring period
1.	GS Ref. No. 685.	15/11/2008	Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA-DD 1	The project is fully implemented with respect to the registered GS VPA: 31,138 ICS have been commissioning; this number is higher than the described in the VPA-DD however, a design of change -an increase in ICS- was approved by GS /47/ (31,042)
2.	GS Ref. No. 1049.	20/03/2010	Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA-DD 2	The project is partially implemented, compared with the description included in the registered GS VPA-DD; 40,526

				ICS have been commissioning on site, of a total of 49,051 described in the document.
3.	GS Ref. No. 1385.	14/05/2011	Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA-DD 3	The project is partially implemented, compared with the description included in the registered GS VPA-DD; 25,412 ICS have been commissioning on site of a total of 49,823 described in the document.

A design changed of the project activity was approved on 08/10/2012, approving to increase of 9000 stoves that the ones described in the VPA 1.

All projects described in the GS VPA-DDs are currently operating. ERs to be claimed are higher than the expected ones included in the registered GS VPA-DD, explanation regarding this point is included in the next table:

GS VPA-DD	**ER claimed (tCO_2)**	**ER expected (tCO_2)**	**PP explanation**	**DOE opinion**
VPA1	83,076	29,182	Three main factors explain the increase in emission reductions: **a) Amount of stoves increased from 24,097 in the expected baseline to 31,138 in 2012.** **b) Consumption of wood increased as well, as per the reason explained in incise b) of DOE opinion: the age of stoves was determined following a survey, instead of assuming an "aging factor".** **c) A realistic Seasonality factor has been taken into account compared with the ex-ante estimation inputs where dry season were only considered.** d) **GWP changed from 21 to 25, as per IPCC fourth assessment report /32/ .**	a)The amount of improved stoves were confirmed with the information provided by the project participants, the registers with the amount of improved stoves implemented /7/8/, which was confirmed with the information included in the survives provided to the DOE by project participants /9/. b) The age of the stove was determined by a survey /9/, considering the time that the stove is used and the maintenance (replacing of the combustion chamber) /10/. Age of the stove is determined considering both factors. c) Amount of wood was reported per season, and not assuming that all wood was collected during the dry season /7/. d)GWP of methane increased from 21 to 25. e) The DOE verified that the GWP

				for N2O decreased from 310 to 298, however this parameter is multiplied by the factor 0.004 tN_2O/TJ, hence the impact over ER is minimum.
VPA 2	245,608	23,738	**a) Higher wood consumptions than in previous VPA.** In the VPA-DD, the wood consumptions in baseline and project scenarios were estimated with basis on results from previous VPA, that is to say VPA1. The daily average wood consumption were estimated at 9.29 kg/day/stove in baseline scenario and 6.78 kg/day/stove in project scenario, whereas the last PSKT realized by LPP ITYF showed a wood consumption of 15.71 kg/day/stove in baseline scenario and 5.41 kg/day/stove in project scenario. This can be explained by the difference of context of VPA2 compared to VPA1 and the improvements of ITYF stove model and diffusion model. Therefore wood savings have been significantly underestimated in the VPA-DD. **b) Wood consumption data showed improvement in stove efficiency throughout time.** The aging factor presented in the VPA-DD was a 15% discount	a) Consumption of wood was underestimated, records of currently wood consumption has been registered and provided to the DOE. b) Due to a correct maintenance, the data shown that efficiency of stoves was improved, instead of decreasing. c) Drop off was estimated by reaching a 10%, however, the kitchen has an utilisation of : Cluster $ITYF_{y=2013}$: 99.89% Cluster $ITYF_{y=2014}$: 99.31% Cluster $GRM_{y=2013}$: 89.25 % Cluster $GRM_{y=2014}$: 82.99% /11/ d) Measurement of wood was reported as per season (dry and wet season) /11//12/. e) GWP of methane increased from 21 to 25. f) The DOE verified that the GWP for N_2O decreased from 310 to 298, however this parameter is multiplied by the factor 0.004 tN_2O/TJ, hence the impact over ER is minimum.

			applied each year after the second year with basis on an emission reduction calculation measured on stoves recently installed. During this new monitoring period, PSKT were performed by ITYF on each stove age category and results showed that wood savings do not decrease linearly throughout the years and that they can be constant or even increase if adequate maintenance is provided. This mainly explains the difference between estimated and actual emission reductions. **c) Usage monitoring showed lower drop-off rate.** In the VPA-DD, the drop-off rate was conservatively estimated at 10% whereas ITYF's PSKS showed much better results with an average usage rate of 99.60% for this monitoring period. **d) Seasonality monitoring showed higher wood savings during rainy season.** The emission reductions initially estimated in the VPA-DD were based on dry season data (the only available at that time) which were used for the whole year as it was conservative to assume there is no seasonality variation in wood consumption. For this third monitoring period, quantitative data on seasonality were produced for each cluster	

			which allowed integration in the emission reductions calculations of the variation in households' wood consumption between seasons. It has been measured that in the ITYF cluster, the beneficiaries save on average 7% more wood in rainy season compared to dry season. This explains partly the important increase in emission reductions.	
VPA 3	65,094	48,370	Three main factors contributed to increase the amount of emission reductions to be claimed, during this monitoring period. a) Wood savings reported values higher than the expected in the baseline, hence this instead of a value of 3.58 kg/day/stove, wood savings reached a value of 5.26 kg/day/stove for ITYF and 4.39 kg/day/stove per day for GRLL. b) The age factor included does not follows the former parameter used in the baseline "Aging factor" c) Amount of type that the improved stove was used: an estimation of 12.7% of drop-off was considered, but the rate only reached 3,37, considerable lower than the expected one. d) GWP of methane increased from 21 to 25.	a) Information provided by PP confirms that amount of wood consumed was underestimated. b) The age of stove has been determined following the procedure explained in section 3.4, instead of the information provided in the VPA-DD. c) Stove has been utilised in a higher rate that the estimated one. /13/14 / d) GWP of methane increased from 21 to 25. e)(The DOE verified that the GWP for N_2O decreased from 310 to 298, however this parameter is multiplied by the factor 0.004 tN_2O/TJ, hence the impact over ER is minimum.

TÜV Rheinland verification team considers the project description of the project contained in the registered VPA- DD-DD and GS passport is complete and accurate. The PDD complies with the relevant methodology, tools, forms and guidance which are the latest one available at the time of first submission to The Gold Standard.

3.1.2 The actual operation of the GS project activity

Project physical features (technology, project equipment, monitoring and metering equipment)	The PoA and associated GS VPA- DD consist in the installation of improved cook stoves in the Host Country (Peru).	
Any Project Design Change been sought and approved by GS Secretariat for the project?	☒ Yes ☐ No	Yes, The installation of 9000 additional ICS as part of the design change (31,138 ICS) /47/
Any Changes in the monitoring Plan caused by material and permanent design Changes which was approved by GS Secretariat?	☒ Yes ☐ No	Monitoring has been modified as per GS recommendations; updates have been approved by the GS Regional Manager of Latin America verified through e-mails with the next changes: • **Monitoring frequency of Kitchen Survey (KS)**: It is not necessary to monitor this parameter every three months, but before the verification /15/47/ • **Statistical analysis:** Utilization of the 90 interval of confidence plus ±30 % of estimated mean /16/47/ • **Calculation of NRB parameter**: as per UNFCCC methodology AMS II-G /17/47/
Any changes in the sustainable development monitoring plan?	☐ Yes ☒ No	No, any change in the sustainable Monitoring plan has happened to the project activity.
Any Revision in Monitoring plan is sought and approved by EB for the project?	☐ Yes ☒ No	Any revision of the monitoring plan has been sought to GS EB.
Does the monitoring report provide line diagram showing all relevant monitoring points?	☐ Yes ☒ No	This point is not applicable, due to the nature of the project activity.

In summary, the monitoring period is reasonable and the actual implementation of the project activity is appropriate to the registered GS VDA DD GS passport.

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

Determination Requirements	Criteria fulfilled	Determination and reporting by the verification team
Any Deviation been sought and approved by EB for the project.	☐ Yes ☒ No	No, any deviation has been sought to GS EB to be approved.
Is complete set of data for the specified monitoring period is available.	☒ Yes ☐ No	Yes, complete set of data is available for the monitoring period.
Is the required information provided in the monitoring report has been cross-checked with other sources (ex – plant logbooks, inventories, purchase records, laboratory analysis).	☒ Yes ☐ No	Please refer to section 3.3 "Monitoring parameters" to further details.
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	Yes, however calculation method has been updated to the latest methodological version, as per GS request.

Determination Requirements	Criteria fulfilled	Determination and reporting by the verification team
Is all assumptions used for emission calculation have been justified.	☒ Yes ☐ No	Yes, assumptions done by PP has been duly approved by the GS during past verifications, hence all assumptions used are properly justified /15//16//17/.
Is appropriate emission factors, IPCC default values and other reference values have been correctly applied.	☒ Yes ☐ No	Yes, emission factors have been updated to the IPCC Fourth Assessment Report /37/.

The DOE verification team is able to confirm that the monitoring plans contained in the registered VPA-DD listed below are in accordance with the approved methodology applied by the PoA, i.e. Methodology for Improved Cook-stoves and Kitchen Regimes (version 01) the latest version available at the time of first submission to The Gold Standard:

Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 1; 4th monitoring period (version 1, 01-08-2014);

Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 2; 3rd monitoring period (version 1, 01-08-2014);

Qori Q'oncha – Improved Cook stoves Diffusion Programme in Peru – VPA- DD 3; 2nd monitoring period (version 1, 01-08-2014)).

3.3 Compliance of the Actual monitoring with monitoring plan in the PoA-DD and GS passport

As part of the improvements in the Gold Standard, the monitoring plan and procedures have been modified following the guidelines of the GS, the updated methodologies and the indications raised as FARs from previous verifications. The main changes are:

- Monitoring frequency of Kitchen Survey (KS): it is not necessary to monitor this parameter every three months, but before the verification /15/.
- Statistical analysis: Utilization of the 90 interval of confidence plus ±30 % of estimated mean /16/.
- Calculation of NRB parameter, as per UNFCCC methodology AMS II G /17/.
- Approval to include 9000 more improved cooked stoves as part of the PoA, compared with the one ex-ante estimated.

Hence, the DOE confirms that the monitoring has been carried out in accordance with the monitoring contained in the registered PoA-DD dated 14/11/2010 and GS continuous improvements/recommendations.

3.3.1 Monitored parameters

For Emission Reductions

Ex-Post Parameters:

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$B_{bl,y}$ Mass of woody biomass combusted per stove in the baseline in year y.
Measuring frequency/Time Interval:	In the case of VP1. Fixed baseline is chosen at VPA level. The data is calculated from the same Baseline Kitchen Tests performed during the

	last monitoring period. For VPA2: Fixed baseline is chosen at VPA level. The data is calculated from the same Baseline Kitchen Tests performed during the last monitoring period. In the case of VPA3: Fixed baseline is chosen at VPA level. The data is calculated from the same Baseline Kitchen Tests performed during the last monitoring period.
Reporting frequency:	Biennial as per VPAs,
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, as the methodology does not define an specific frequency of monitoring or reporting, however a biennial monitoring has been implemented.
Type of monitoring equipment:	Not defined by the methodology, however PPs use an electronic balance.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Accuracy is not defined by the PoA but a 10g is indicated by manufacturer /18/.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	Calibration is as per manufacturer specifications.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	No clarified, therefore the FAR 1 /18/ has been raised. Refer to Table 3 of Annex 2 for further information.
Company performing the calibration:	Not clarified, Please refer to FAR 1 /18/.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes, device is currently working correct. As indicated by the manufacturer.
Is (are) calibration(s) valid for the whole reporting period?	No, therefore the FAR 1 /18/ has been raised. Refer to Table 3 of Annex 2 for further information.
If applicable, has the reported data been cross-checked with other available data?	Values were cross-checked against the file ITYF2- ER calculation /11/ tabs: BL & PS emissions, wood savings and emission reductions and GRM- ER calculation /20/ tabs: BL & PS emissions, wood savings and Emission reductions. Also, values were cross- checked against the file ITYF3- ER calculation /13/ tabs: BL & PS emissions, wood savings and emission reductions, and GRA- ER calculation /21/ tabs: BL & PS emissions, wood savings and Emission reductions, and GRLL- ER calculation /22/ tabs: BL & PS emissions, wood savings and Emission reductions.
How were the values in the monitoring report verified?	Cross checked against the files: • For VPA1- cluster ITF: 10.101 kg/day/stove. Input was checked against the file ITYF1- ER calculation /7/ tabs: BL & PS emissions, wood savings and emission reductions. Also, surveys for VPA 1 were verified /9/. • For VPA2- cluster ITF : 15.63 kg/day/stove Cluster ITYFcluster CT: 16.604 kg/day/stove Cluster ITYFcluster CMNC: 14.559 kg/day/stove

	For ITYFcluster CT and ITYFcluster CMNC, please refer to Excel 'ITYF2 - ER calculation - v3', tab BLKT, cells DS16 and DU16 to see calculations. Cluster GRM: 6.391 kg/day/stove Input was checked against the file ITYF2- ER calculation /11/ tabs: BL & PS emissions, wood savings and emission reductions and GRM- ER calculation /20/ tabs: BL & PS emissions, wood savings and Emission reductions. Also, surveys for VPA 2 were verified /12/. • For VPA3: Cluster ITYF: 11.069 kg/day/stove Cluster GRA: 6.250 kg/day/stove Cluster GRLL: 10.524 kg/day/stove Input was checked against the file ITYF3- ER calculation /13/ tabs: BL & PS emissions, wood savings and emission reductions, and GRA- ER calculation /21/ tabs: BL & PS emissions, wood savings and Emission reductions, and GRLL- ER calculation /22/ tabs: BL & PS emissions, wood savings and Emission reductions. Also, surveys for VPA 3 were verified /14/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the DOE performed cross check against the raw data and ER calculations excel file,
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?	Complete set of data is included, also the monitoring frequency is set by the methodology biennially but the parameter is monitored on a three day basis, excluding week ends (when consumption increases). Hence, a conservative scenario is applied.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$B_{pj,y}$ Mass of woody biomass combusted per stove in the project in year y.
Measuring frequency/Time Interval:	Biennial, according to VPA-DD.
Reporting frequency:	N/A. Not defined by the methodology, however it is reported before each verification.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, as the monitoring frequency (biennially) is followed by PP.
Type of monitoring equipment:	Not defined by the methodology, however PP uses an electronic balance.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Accuracy is not defined by the PoA but a 10g is indicated by manufacturer /18/.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	Calibration is as per manufacturer specifications.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Not clarified, therefore the FAR 1 /18/ has been raised. Refer to Table 3 of Annex 2 for further information.
Company performing the calibration:	Not clarified, therefore FAR 1 /18/ has been raised. Refer to

	Table 3 of Annex 2 for further information.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes, device is currently working correct as observed during the site visit and indicated by the manufacturer. /18/
Is (are) calibration(s) valid for the whole reporting period?	Not clarified therefore FAR 1 /18/ has been raised. Refer to Table 3 of Annex 2 for further information.
If applicable, has the reported data been cross-checked with other available data?	Not applicable, due to calibration is released with the instrument.
How were the values in the monitoring report verified?	Cross checked against the files: • For VPA1- cluster ITF: 5.526 kg/day/stove Input was checked against the file ITYF1- ER calculation /7/ tabs: BL & PS emissions, wood savings and Emission reductions. Also, surveys for VPA 1 were verified /9/. • For VPA2- cluster: Cluster ITYF: 5.575 kg/day/stove Cluster GRM: 5.022 kg/day/stove Input was checked against the file ITYF2- ER calculation /11/ tabs: BL & PS emissions, wood savings and Emission reductions and GRM- ER calculation /20/ tabs: BL & PS emissions, wood savings and Emission reductions. Also, surveys for VPA 2 were verified /12/. • For VPA3: Cluster ITYF: 5.731 kg/day/stove Cluster GRA: 5.798kg/day/stove Cluster GRLL: 4.531 kg/day/stove Input was checked against the file ITYF3- ER calculation /13/ tabs: BL & PS emissions, wood savings and Emission reductions, and GRA- ER calculation /21/ tabs: BL & PS emissions, wood savings and Emission reductions, and GRLL- ER calculation /22/ tabs: BL & PS emissions, wood savings and Emission reductions. Also, surveys for VPA 3 were verified /14/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The customer has developed and implemented a project manual (Microsol manual) /19/ in order to ensure the QA/QC procedures in place. The verification team observed the correct implementation of the manual through the raw data and ER calculations excel files and interviews to the POA managers /ii//iii//iv//v/.
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?	Complete set of sampling data is included; The monitoring frequency is done biennially, as per methodological recommendations. Hence, a conservative scenario is applied.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$X_{NRB,bj,y}$ Non-renewability status of woody biomass fuel in year y in baseline scenario
Measuring frequency/Time Interval:	Biennial, as per methodological recommendations.

Reporting frequency:	This parameter has been calculated for the current verification on a biennial basis (at least).
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, as this parameter is calculated on a biennial basis.
Type of monitoring equipment:	N/A. This parameter is calculated.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. This parameter is calculated.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. This parameter is calculated.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. This parameter is calculated.
Company performing the calibration:	N/A. This parameter is calculated.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. This parameter is calculated.
Is (are) calibration(s) valid for the whole reporting period?	N/A. This parameter is calculated.
If applicable, has the reported data been cross-checked with other available data?	This parameter is calculated, hence the value was cross checked against the source of data /9//12//14// -survey of data and scans- and calculations were confirmed to be corrected done in the excel file workbooks /7//11//13//20//21/.
How were the values in the monitoring report verified?	Calculations done in the ERs workbooks were verified, the DOE confirms that calculations are correctly done. • For VPA1: Cluster ITYF: 69.63% As verified in the ITYF1- ERcalculation-v2 tab NRB. /7/ • For VPA2: Cluster ITYF: 70.41% Cluster GRM: 69.63% As verified in the ITYF2- ERcalculation-v2 tab NRB /11/,and "GRM- ER calculation V1" tab NRB /20/. • For VPA 3: Cluster ITYF: 69.63% Cluster GRA: 70.32% Cluster GRLL: 69.31% As verified in the ITYF3- ERcalculation-v1tab NRB /13/ and "GRA- ER calculation V1" tab NRB /21/ and GRLL, ER calculation V1, tab NRB /22/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. As PP applies a procedure to perform capturing and quality checks through the Microsol Manual /19/.
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	Data is based on sampling, as per methodological recommendations; hence, data is available.

approved?	

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$X_{NRB,pj,y}$ Non-renewability status of woody biomass fuel in year y in project scenario.
Measuring frequency/Time Interval:	Biennial, as per methodological recommendations.
Reporting frequency:	This parameter has been calculated for the current verification on a biennial basis (at least).
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, as this parameter is calculated on a biennial basis.
Type of monitoring equipment:	N/A. This parameter is calculated.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. This parameter is calculated.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. This parameter is calculated.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. This parameter is calculated.
Company performing the calibration:	N/A. This parameter is calculated.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. This parameter is calculated.
Is (are) calibration(s) valid for the whole reporting period?	N/A. This parameter is calculated.
If applicable, has the reported data been cross-checked with other available data?	This parameter is calculated, hence the value was cross checked against the source of data /9//12//14/ -survey of data and scans- and calculations were confirmed to be corrected done in the excel file workbooks /7//11//13//20//21/.
How were the values in the monitoring report verified?	Calculations done in the ERs workbooks were verified, the DOE confirms that calculations are correctly done. • For VPA1: Cluster ITYF: 69.63% As verified in the ITYF1- ERcalculation-v2 tab NRB. /7/ • For VPA2: Cluster ITYF: 70.41% Cluster GRM: 69.63% As verified in the ITYF2- ERcalculation-v2 tab NRB /11/,and "GRM- ER calculation V1" tab NRB /20/ • For VPA 3: Cluster ITYF: 69.63% Cluster GRA: 70.32% Cluster GRLL: 69.31% As verified in the ITYF3- ERcalculation-v1tab NRB /13/;and "GRA- ER calculation V1" tab NRB /21/; and GRLL, ER calculation V1, tab NRB /22/.
Does the data management (from monitoring equipment	Yes. As PP applies a procedure to perform capturing and

to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	quality checks through the Microsol Manual /19/.
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?	Data is based on sampling, as per methodological recommendations; hence, data is available.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$l_{i,y}$ Stove installed/cluster/month
Measuring frequency/Time Interval:	As per methodology, monitoring shall be done biennially, however, monitoring is done in a monthly basis and data base is updated periodically; before each monitoring campaign and before each verification. .
Reporting frequency:	As per methodology, monitoring shall be done biennially, however, monitoring is done in a monthly basis and data base is updated periodically; before each monitoring campaign and before each verification. .
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, As per methodology, monitoring shall be done biennially, however, monitoring is done in a monthly basis and data base is updated periodically; before each monitoring campaign and before each verification.
Type of monitoring equipment:	N/A. No necessary to use an equipment to measure this parameter.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. No necessary to use an equipment to measure this parameter.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. No necessary to use an equipment to measure this parameter.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. No necessary to use an equipment to measure this parameter.
Company performing the calibration:	N/A. No necessary to use an equipment to measure this parameter.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. No necessary to use an equipment to measure this parameter.
Is (are) calibration(s) valid for the whole reporting period?	N/A. No necessary to use an equipment to measure this parameter.
If applicable, has the reported data been cross-checked with other available data?	Yes, information is included in the excel files: • For VPA1: 31, 042 beneficiaries. "ITYF1, ER calculation V2" /7/ and cross-checked against the raw data information "ITYF1 - Beneficiaries list"/23/ • For VPA2: ITYF: 37,868 beneficiaries; GRM: 2,658 beneficiaries; "ITYF2, ER calculation V2" /7/ and cross-checked against the raw data information "ITYF2 - Beneficiaries list"/24/; and "GRM- ER calculation V1" /20/ and raw data cross-checked versus "GRM – Beneficiaries list" /25/. • For VPA3: ITYF: 3,794 beneficiaries;

	GRA: 6,849 beneficiaries; GRLL: 14,769 beneficiaries. "ITYF3, ER calculation V2" /13/ and cross-checked against the raw data information "ITYF3 - Beneficiaries list"/26/; and "GRA- ER calculation V1" /21/ and raw data cross-checked versus "GRA – Beneficiaries list" /27/. "GRLL- ER calculation V1" /22/ and raw data cross-checked versus "GRLL – Beneficiaries list" /28/.
How were the values in the monitoring report verified?	Yes, information is included in the excel file: For VPA1: "ITYF1, ER calculation V2" /7/ and cross-checked against the raw data information "ITYF2 - Beneficiaries list" /24/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, as the process includes double counting and random cross-check, as per procedure developed by Microsol /19/.
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?	All data is available and properly recorded, evidence was provided to the DOE and by cross-checking confirmed to be correct.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$U_{pj,y}$ Cumulative usage rate for ICS in project scenario pj in year y, based on cumulative adoption rate and drop-off revealed by usage surveys.
Measuring frequency/Time Interval:	As per methodology, this parameter shall be measured biennially; that is follows by PP.
Reporting frequency:	As per methodology, this parameter shall be measured biennially; that is follows by PP.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, both of them are as per registered methodology.
Type of monitoring equipment:	N/A. It is not necessary an instrument to monitor this parameter.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. It is not necessary an instrument to monitor this parameter.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. It is not necessary an instrument to monitor this parameter.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. It is not necessary an instrument to monitor this parameter.
Company performing the calibration:	N/A. It is not necessary an instrument to monitor this parameter.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. It is not necessary an instrument to monitor this parameter.
Is (are) calibration(s) valid for the whole reporting period?	N/A. It is not necessary an instrument to monitor this parameter.
If applicable, has the reported data been cross-checked with other available data?	Yes, all inputs contained in the MR were cross-checked against the Emission Reduction Workbooks and Beneficiaries

	lists /7/8/11/13/20/24/25/26/27/28/, performed by PP.
How were the values in the monitoring report verified?	• For VPA1: Cluster $ITYF_{y=2013}$: 100.00 % Cluster $ITYF_{y=2014}$: 100.00 % As indicated in the excel file "ITYF1, ER calculation V2" tab PSKS /7/, the information is based on the surveys prepared by PP /8/. • For VPA2: Cluster $ITYF_{y=2013}$: 99.89% Cluster $ITYF_{y=2014}$: 99.31% Cluster $GRM_{y=2013}$: 89.25 % Cluster $GRM_{y=2014}$: 82.99% As indicated in the excel file "ITYF2, ER calculation V2" tab PSKS, CWP and Emission Reductions /11/ and "GRM- ER calculation V1" PSKS, CWP and Emission Reductions /20/ , the information is based on the surveys performed by PP /24//25/. • For VPA3: Cluster $ITYF_{y=2013}$: 100.00% Cluster $ITYF_{y=2014}$: 100.00% As indicated in the excel file "ITYF3, ER calculation V1" please refer totabs: PSKS, CWP;Emission Reductions /13/ included in the workbook and surveys performed by PP /26/ Cluster $GRA_{y=2013}$: 96.67% Cluster $GRA_{y=2014}$: 97.50% As indicated in the excel file "GRA, ER calculation V1" tab PSKS, CWP and Emission Reductions /21/ and surveys performed by PP /27/. Cluster $GRLL_{y=2013}$: 100.00% Cluster $GRLL_{y=2014}$: 100.00% As indicated in the excel file "GRLL, ER calculation V1" please refer to tabs: PSKS, CWP and Emission Reductions /22/ and surveys performed by PP /28/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, data management is based on the procedures manual developed by Microsol /19/, which includes a quality check and confidence interval analysis.
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?	All data is available and it is based on surveys performed by PP, as indicated in the monitoring plan.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	O_y Represents the removal rate of the baseline stoves in each

	cluster (fraction %).
Measuring frequency/Time Interval:	This parameter is measured biennial, as stated in the monitoring plan of the PoA.
Reporting frequency:	This parameter is reported previous to the verification.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, measuring shall be done biennial, as per PoA registered monitoring plan.
Type of monitoring equipment:	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
Company performing the calibration:	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
Is (are) calibration(s) valid for the whole reporting period?	N/A. Due to the nature of the parameter, it is not necessary a monitoring instrument.
If applicable, has the reported data been cross-checked with other available data?	Values of the MR have been cross checked against the ER workbooks and raw data, included in the surveys performed by PP.
How were the values in the monitoring report verified?	• For VPA1: Cluster ITYF: 100% Information was included in the "ITYF1, ER calculation V2", tab "other indicators" and PSKT /7/, • For VPA2: Cluster ITYF: 97.89 % Cluster GRM: 63.43% As indicated in the excel file "ITYF2, ER calculation V2" tab "other indications" and "PSKT" /11/ and "GRM- ER calculation V1" tab "other indications" and PSKT /20/ , the information is based on the surveys performed by PP /24//25/. • For VPA3: Cluster ITYF: 99.40 % As indicated in the excel file "ITYF3, ER calculation V1" tab "other indications" and "PSKS", /13/ Cluster GRA: 70.18 % As indicated in the excel file "GRA, ER calculation V1" tab "other indications" and "PSKS" /21/. Cluster GRLL: 90.96 % As indicated in the excel file "GRLL, ER calculation V1" tab "other indications" and "PSKS". /22/

	All inputs were taken from the surveys performed by PP /23//24//26//27/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, proper management of information is done as per Manual of Procedures implemented by Microsol /19/.
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?	N/A. Data has been registered as per monitoring plan, hence all data is available.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	DNH parameter – Corruption Percentage of carbon revenues subject to corruption or suspicion of corruption if the LPP does not comply with the principles of the Do Not Harm Declaration.
Measuring frequency/Time Interval:	Biennial, after first issuance as per registered PoA.
Reporting frequency:	Biennial, after first issuance as per registered PoA.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, measuring and reporting are been done as per registered PoA.
Type of monitoring equipment:	N/A. It is not necessary to use an equipment to measure this parameter.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. It is not necessary to use an equipment to measure this parameter.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. It is not necessary to use an equipment to measure this parameter.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. It is not necessary to use an equipment to measure this parameter.
Company performing the calibration:	N/A. It is not necessary to use an equipment to measure this parameter.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. It is not necessary to use an equipment to measure this parameter.
Is (are) calibration(s) valid for the whole reporting period?	N/A. It is not necessary to use an equipment to measure this parameter.
If applicable, has the reported data been cross-checked with other available data?	Data reported has been cross-checked against the document "Carbon revenues use report" /29/ which contains a detail accounting of utilisation of revenues of carbon credits. As per analysis, it can be concluded that any suspicious of corruption can be raised as per implementation of the project activity.
How were the values in the monitoring report verified?	Data reported has been cross-checked against the document "Carbon revenues use report" /29/ which contains a detail accounting of utilisation of revenues of carbon credits. As per analysis, it can be concluded that any suspicious of corruption can be raised as per implementation of the project activity. Value is zero for VPA1 and VPA2.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Invoices and expenses are included in detailed and properly justified, as per analysis of the accountant any suspicious of corruption as per the implementation of the project activity can be observed.
In case only partial data are available because activity	Information is as per registered PoA. In the case of VP3, a

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?	year has not passed yet since issuance, hence this is the only value not available (currently, this parameter shall be reported a year after the issuance)

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$AF_{bl,i,y}$ Mass of alternative fuel i combusted in the baseline scenario in year y (t_fuel/unit-year).
Measuring frequency/Time Interval:	N/A. This parameter is not monitored under this PoA.
Reporting frequency:	N/A. This parameter is not monitored under this PoA.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	N/A. This parameter is not monitored under this PoA.
Type of monitoring equipment:	N/A. This parameter is not monitored under this PoA.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. This parameter is not monitored under this PoA.
Calibration frequency /interval: Is it Board guidance / local or national standards / manufacturers specification	N/A. This parameter is not monitored under this PoA.
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. This parameter is not monitored under this PoA.
Company performing the calibration:	N/A. This parameter is not monitored under this PoA.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. This parameter is not monitored under this PoA.
Is (are) calibration(s) valid for the whole reporting period?	N/A. This parameter is not monitored under this PoA.
If applicable, has the reported data been cross-checked with other available data?	N/A. This parameter is not monitored under this PoA.
How were the values in the monitoring report verified?	N/A. This parameter is not monitored under this PoA.
Does the data management (from monitoring equipment 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 parameter is not monitored under this PoA.
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?	N/A. This parameter is not monitored under this PoA.

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of PoA-DD):	$AF_{pl,i,y}$ Mass of alternative fuel i combusted in the baseline scenario in year y (t_fuel/unit-year).
Measuring frequency/Time Interval:	N/A. This parameter is not monitored under this PoA.
Reporting frequency:	N/A. This parameter is not monitored under this PoA.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	N/A. This parameter is not monitored under this PoA.
Type of monitoring equipment:	N/A. This parameter is not monitored under this PoA.
Is accuracy of the monitoring equipment as stated in the PoA-DD? If the PoA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	N/A. This parameter is not monitored under this PoA.
Calibration frequency /interval:	N/A. This parameter is not monitored under this PoA.

Is it Board guidance / local or national standards / manufacturers specification	
Is the calibration interval in line with the monitoring plan of the PoA-DD? If the PoA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	N/A. This parameter is not monitored under this PoA.
Company performing the calibration:	N/A. This parameter is not monitored under this PoA.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A. This parameter is not monitored under this PoA.
Is (are) calibration(s) valid for the whole reporting period?	N/A. This parameter is not monitored under this PoA.
If applicable, has the reported data been cross-checked with other available data?	N/A. This parameter is not monitored under this PoA.
How were the values in the monitoring report verified?	N/A. This parameter is not monitored under this PoA.
Does the data management (from monitoring equipment 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 parameter is not monitored under this PoA.
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?	N/A. This parameter is not monitored under this PoA.

In summary, verification team confirms that all the ex-post parameters are monitored in accordance to the approved monitoring plan and applied methodology.

Ex-ante Parameters:

Default values used:	$EF_{bl.bio,CO2}$ CO_2 emission factor arising from use of wood fuel in baseline scenario 1.7472 tCO2/t wood (=112.0 tCO2/TJ * 0.0156 TJ/ t)
Source and Verification of the source:	As per "2006 IPCC Guidelines for National Greenhouse Gas Inventories, Tables 1.2/1.4" /30/

Default values used:	$EF_{pl.bio,CO2}$ CO_2 emission factor arising from use of wood fuel in baseline scenario 1.7472 tCO2/t wood
Source and Verification of the source:	As per "2006 IPCC Guidelines for National Greenhouse Gas Inventories, Tables 1.2/1.4" /30/

Default values used:	$EF_{bj.bio,non-co2}$ Non-CO2 emission factor arising from use of wood-fuel in project scenario 8.692 tCO2eq/t wood
Source and Verification of the source:	As per "2006 Guidelines for National greenhouse Gas Inventories, Vol. 2, Ch. 2, Table 2.5 /31/ As per "global warming potentials: IPCC Fourth Assessment Report: Climate Change 2007, Table 2.14" /32/

Default values used:	$EF_{pj.bio,non-co2}$ Non-CO2 emission factor arising from use of wood-fuel in

	project scenario 0.1356 tCO2eq/t wood
Source and Verification of the source:	As per "2006 Guidelines for National greenhouse Gas Inventories, Vol. 2, Ch. 2, Table 2.5 /31/ As per "global warming potentials: IPCC Fourth Assessment Report: Climate Change 2007, Table 2.14" /32/

For Contributions to Sustainable Development

As per the sustainability monitoring plan in the registered GS passport, verification team evaluate all sustainable development indicators as followed table:

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Air Quality
Which parameters were selected?	Presence of smoke in the household in compared with baseline situation.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, as the parameter is monitoring by interviews with beneficiaries. Interviews are performed biennial by PPs /9/12/14/, and are clearly and transparent performed.
Did the monitoring of these parameters lead to positive result compared to the baseline situation? (Yes/No).	Yes, as the baseline situation was the indoor air pollution due to the utilisation of "three stone stoves", including smoke and different contaminants produced by the combustion of wood with the implementation of the project activity, nowadays smoke is out of the house, hence quality of air is substantially improved.
Are there any mitigation measures (Yes/No)?	No, mitigation measures are associated with the implementation of the current PoA.
How was the result of this indicator in the GS monitoring report verified?	The indicator was confirmed during the site visit with interviews to beneficiaries and sighting of conditions of home´s beneficiaries.

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Quality of employment
Which parameters were selected?	Number of permanent jobs created since the implementation of the PoA and associated VPA-DD.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, as per registered VPAs, parameter is monitoring as per quantity of employment created. Monitoring is done biennially.
Did the monitoring of these parameters lead to positive result compared to the baseline situation? (Yes/No).	Yes, as jobs were created as per the implementation of the project activity and associated VPA- DD.
Are there any mitigation measures (Yes/No)?	No, mitigation measures are associated with the implementation of the current PoA.
How was the result of this indicator in the GS monitoring report verified?	This indicator was verified by signed and sealed records of employments provided by the "Instituto de Trabajo y Familia" ITFY1 ITFY2 and ITFY3. ITYF report /33/ 14 permanent jobs, in the case of the "Gobierno Regional

	de Arequipa" (GRA) /48/, it is reported that 9 permanent jobs were created, while in the case of GRLL one permanent job was created /49/. The indicator is the number of permanent jobs created for the project.

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Livelihood of the poor.
Which parameters were selected?	Presence of the improved stove with chimney.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, as the goal of the PoA and associated VPA-DD is to implement improved stoves.
Did the monitoring of these parameters lead to positive result compared to the baseline situation? (Yes/No).	Yes, as in the baseline "three stone stoves (fogones)" were onsite, which creates a polluted home´s environment; an improved stove, contributes to reduce the livelihood of poor and health.
Are there any mitigation measures (Yes/No)?	No, any mitigation measure is associated with the implementation of the PoA and associated VPAs-DD.
How was the result of this indicator in the GS monitoring report verified?	It was verified by records provided by PP /22//23//24//25//26//27/ and cross-checking with beneficiaries during the site visit (refer to section 2.2 for a complete list.

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Access to affordable and clean energy services.
Which parameters were selected?	Presence of an improved cookstoves.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, as this parameter is monitoring as per the amount of ICS implemented on site; hence, information provided by PP is reliable and transparent recorded.
Did the monitoring of these parameters lead to positive result compared to the baseline situation? (Yes/No).	Yes, as the stoves used on site reduces the amount of wood used per family and also provides a cleanest and safety environment.
Are there any mitigation measures (Yes/No)?	No, any mitigation measure is associated with the implementation of the PoA and associated VPAs-DD.
How was the result of this indicator in the GS monitoring report verified?	This parameter is monitoring by records provided by PP /22//23//24//25//26//27/ and confirmed by surveys performed by the DOE during the site visit /2.2/.

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Human and institutional capacity.
Which parameters were selected?	Capacity building for beneficiaries.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, improved cooking stoves are built by own beneficiaries, hence, human capacity is improved as per the development of the PoA.
Did the monitoring of these parameters lead to	Yes, as before the implementation of the PoA, the

positive result compared to the baseline situation? (Yes/No).	"three stone stoves" were onsite and beneficiaries learnt to build its own stoves, action which contributes to develop the human and institutional capacity.
Are there any mitigation measures (Yes/No)?	No, any mitigation measure is associated with the implementation of the PoA and associated VPAs-DD.
How was the result of this indicator in the GS monitoring report verified?	This parameter is monitoring by records provided by PP /22//23//24//25//26//27/ and confirmed by surveys performed by the DOE, during the site visit (please refer to section /2.2/.

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Quantitative employment and income generation
Which parameters were selected?	Number of people contracted for the project.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, as per registered VPAs, parameter is monitoring as per quantity of employment created. Monitoring is done biennially.
Did the monitoring of these parameters lead to positive result compared to the baseline situation? (Yes/No).	Yes, as jobs were created as per the implementation of the project activity and associated VPA- DD.
Are there any mitigation measures (Yes/No)?	No, mitigation measures are associated with the implementation of the current PoA.
How was the result of this indicator in the GS monitoring report verified?	This indicator is the number of people contracted for the project, and in it was verified by signed and sealed records of employments provided by the "Instituto de Trabajo y Familia" ITFY1 ITFY2 and ITFY3. ITYF report /33/, by the "Gobierno Regional de Arequipa" (GRA) /48/, by the "Gobierno Regional de la Libertad" GRLL /49/ and "Gobierno Regional de Moquegua", GRM

Monitoring Parameter Requirement	**Assessment/ Observation by the DOE**
indicator: (as in the sustainability monitoring plan of project passport):	Technology transfer and technological self-reliance.
Which parameters were selected?	Capacity building of beneficiaries.
Is the way of monitoring (how, when and by who) in accordance with the sustainability monitoring plan? "Yes/No"	Yes, improved cookingstoves are built by own beneficiaries, hence, human capacity is improved as per the development of the PoA.
Did the monitoring of these parameters lead to positive result compared to the baseline situation? (Yes/No).	Yes, as before the implementation of the PoA, the "three stone stoves" were onsite, and beneficiaries learnt to build its own stoves, action which contributes to develop the human and institutional capacity.
Are there any mitigation measures (Yes/No)?	No, any mitigation measure is associated with the implementation of the PoA and associated VPAs-DD.
How was the result of this indicator in the GS monitoring report verified?	This parameter is monitoring by records provided by PP /22//23//24//25//26//27/ and confirmed by surveys performed by the DOE, during the site visit (please refer to section /2.2/.

In summary, verification team confirms that all monitored sustainable development indicators are in accordance to the registered GS passport.

3.3.2 Monitoring responsibility

The responsibilities and authorities for monitoring and reporting are in accordance with the ones stated in the monitoring plan.
Roles and responsibilities are clearly identified in the latest version of the quality manual prepared by Microsol /19/, basically, Host's country PP are on charge of performing the surveys and collect information from the site. In order to perform this activity, Microsol is continuously providing trainings /38/39/40/ and provides feedback from GS verification to improve the survey and collecting system; as explained, fully roles and responsibilities are documented on the management system.

How to perform the surveys, introduce data to be analysed, statistical data analysis and conclusions is process continuously improved as per GS recommendations and PP quality improvement's policy. Hence, PPs have developed and prepared the next procedures which guarantee that all data processing will be done, reliable, transparent and traceable, as per GS requirements:

1) QQ sampling procedure, on which, detailed instructions of how sampling shall be done (included regions, amount of people to be survey and procedures to be done) are registered. This procedure is continuously improved as part of PP's improvement policy. /34/
2) QCQQ_PSKT-KT_final; This is the data base on which information taken from surveys is populated to perform the statistical analysis, data base facilitates calculations and analysis of data./35/
3) Guideline Quality Control Excel File, is a procedure prepared to correct fulfilled the data base - QCQQ_PSKT-KT_final- on this procedure, it is clearly explain where data shall be populated, how introduce the data, meaning of expected results obtained and how to avoid possible errors. This procedure is continuously improved to make it more feasible and confident./36/
4) Finally, the "Guidelines for Double-counting process", is a mind map powered by "Bizagi odeler" to explain how to avoid the "double-counting process".

Also, staff on site is dully trained to performed surveys, introduce data, and continuous improve project activity.

The DOE determines that the monitoring responsibility was handled according to the monitoring plan and verifies that responsible personnel is clearly aware of procedures and is able to carry on the responsibility including internal and external training. Two kinds of trainings have been performed: 1) at "Microsol level" and 2) at "Local project Participants level".

The first level: Microsol' level training "QQ verification" /38/ and "key points KS and KT supervisor and surveyor" /39/, includes a complete training regarding to survey, populate and collect the data, including where and how populate the results from surveys, how not induce a response form beneficiaries, when to take the sample (avoiding holly days or Sundays, to be conservative) and so on. This training is complete, clear and easy to follow.

Finally, "Microsol level' training includes a procedure which includes the goals to be reach by surveying project beneficiates /40/, which clarify the reason of asking specific issues, how to ask them and avoid issues typically found in the latest surveys periods.

Also, beneficiaries and community get trainings as well, those trainings includes brochures of benefits of the improved stoves /41/ and general recommendations of how to maintain them and safety guidelines /42/.

3.3.3 Accuracy of equipment

The DOE verified that the accuracy of measure of the monitoring equipment was set according to the requirements of the PoA-DD and VPA-DDs, however the DOE cannot verified that calibration procedures and frequency were carried out according to the monitoring plan or manufacturer specifications or host country requirements.

In this context, the DOE raises the FAR 1 asking the PP before the next verification to demonstrate that scaling used during the current monitoring periods are calibrated and also provide evidence of calibration frequency; following the UNFCCC calibration guidelines /43/ or available GS calibration guidelines.

The table below summarizes relevant specifications of monitoring equipment's:

Monitoring Equipment:	Portable Scale
Function:	Measure the amount of wood fed to the ICS by project beneficiaries.
Ownership:	Project Participants. Microsol and Institute de Trabajo y Familia (ITYF)
Location:	Scales are at the Host Country; and stored at each VPA facilities (i.e ITYF, Properu,, GRM, GRA and GRLL) and used when surveys are performed.
Transaction point:	At beneficiaries' home.
Monitored parameter:	$B_{pl,y}$
Type:	Digital Scale.
Serial number:	Not included.
Accuracy:	10 grams
Last calibration date:	No Specified
Calibration certificate no. and name of the certifier	No Specified
Expiration date of calibration:	No Specified
Current calibration date:	No Specified
Calibration certificate no. and name of the certifier	No Specified
Expiration date of calibration:	No Specified
Frequency of calibration:	No Specified
Relevant sectoral standard:	CE, ROHS

3.3.4 Deviation from and/or Revision of the registered monitoring plan and sustainable development monitoring plan in the registered GS passport

Any revision or deviation from the monitoring plan registered in the PoA or VPAs has been raised to GS. All changes included in this verification were approved by the Gold Standard /15//16//17/ without request a permanent changes revision to the PoA or VPAs.

3.4 Assessment of data and calculation of greenhouse gas emission reductions

3.4.1 Data and calculation of greenhouse gas emission reductions

Against the Guidelines on the Applicability of Materiality in Verifications /45/, version 01.0, the verification team further assessed the materiality in verification on the project activity and interpreted as follows:

Reference	Requirement	Verification team assessment
Section 10	The CMP materiality decision prescribes the thresholds for the application of materiality in verifications, by defining that information is material if it might lead, at an aggregated level, to an overestimation of the total emission reductions or removals achieved by a CDM program of activity equal to or higher than: (a) 0.5 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal of equal to or more than 500,000 tons of carbon dioxide equivalent per year; (b) 1 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal between 300,000 and 500,000 tons of carbon dioxide equivalent per year; (c) 2 per cent of the emission reductions or removals for large-scale project activities achieving a total emission reduction or removal of 300,000 tons of carbon dioxide equivalent per year or less; (d) 5 per cent of the emission reductions or removals for small-scale project activities other than project activities covered under subparagraph (e) below; (e) 10 per cent of the emission reductions or removals for the type of project activities referred to in decision 3/CMP.6, paragraph 38 (referred to as microscale project activities).	Amount of Emission Reductions is 402,001 tCO_2; hence, it belongs to the point b) "1 per cent of emission reductions or removal for project activities achieving a total emission reduction or removal between 300,000 and 500,000 tons of carbon dioxide equivalent per year".
Section 24	The DOE should describe in its certification/certification report the risks, the risk assessment undertaken and how the verification and sampling plans were designed to respond to these risks and ensure that all material errors, omissions or misstatements were detected.	The DOE used a random procedure to determine the people to be survived by cluster according to the GS PoA-DD specifications. Also, verified the quality of questions.

Section 25	The DOE should also describe whether and how the verification and sampling plans were revised to take into account the need for further audit procedures due to the nature/type of errors, omissions or misstatements detected.	The DOE performed a cross checked against the raw data form surveys and information shown by PP though the next files ITYF1, Beneficiaries list /8/, Surveys for VPA1/9/, Surveys for VPA2/12/, Surveys for VPA3/14/, ITYF1 - Beneficiaries list /23/, ITYF2 - Beneficiaries list /24/ , GRM – Beneficiaries list/25/, ITYF3 - Beneficiaries list /26/, GRA - Beneficiaries list /27/, GRLL - Beneficiaries list/28/ . The DOE performed a survey; the DOE reviewed the content of questions and confirmed (by its own questionaries') that inquiries were clear to beneficiaries of the project.
Section 26	The DOE should also document how materiality was applied in determining whether a detected error, omission or misstatement was material or immaterial either individually or in aggregate.	The DOE follows the procedure stated in the GS PoA /4/, performs spot checks with a minimum sample size of 50 for a cluster size higher than 50, as the current verification.
Section 27	The DOE should state in its certification/certification opinion that the claimed emission reductions or removals are free from material errors, omissions or misstatements, with a reasonable level of assurance.	Refer to Certification statement of this report.

As per continuous input of the GS, since latest verification /44/, equations to calculate ER, Baseline and PE have been updated as per GS recommendations, hence, equations and parameters are discussed in the next section:

Baseline Emissions:

$$\boldsymbol{BE_y = B_{by} * \left(X_{NRB,bl,y} * EF_{bl,bio,CO2} + EF_{bl,bio,nonCO2}\right) * 365/1000}$$

Where:

$\boldsymbol{B_{bl,y}}$ Daily mass of woody biomass combusted per stove in baseline scenario in both seasons in year $_y$
$\boldsymbol{X_{NRB,bl,y}}$ Fraction of non-renewable biomass in baseline scenario in year y
$\boldsymbol{EF_{bl,bio,CO2}}$ CO_2 emission factor for biomass
$\boldsymbol{EF_{bl,bio,nonCO2}}$ Non-CO_2 emission factor for biomass

Main change from previous verification was the exclusion of factor Sy, "Seasonality factor" in the year y, instead of it, dry season and wet season' measurements of wood were included.

Results of BEy per stove per year per VPA are summarized in the next tables:

For VPA1:

Parameter	Unit	ITYF
$\boldsymbol{B_{bl,y}}$	kg/stove/day	10.101
$\boldsymbol{NCV_{wood}}$	TJ/ton wood	0.0156
$\boldsymbol{X_{NRB,bl,y}}$	Fraction,	69.63%
$\boldsymbol{EF_{bl,bio,CO_2}}$	tCO_2/TJ	112
$\boldsymbol{EF_{bl,bio,non\,CO_2}}$	tCO_2/TJ	8.692

BE_y	tCO_2e/stove /year	4.985

Ex-Ante Parameters:

Parameter	NCV wood
Default values used:	0.0156 TJ/ t
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories /30/

Parameter	EF_{bl,bio,CO_2}
Default values used:	112 tCO_2/TJ
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories.

Parameter	$EF_{bl,bio,non\ CO_2}$
Default values used:	8.692 tCO_2/TJ
Data Source:	This parameter is the sum of EF CH_4 (7.5 tCO_2/TJ and EF N_2O 1.192 tCO_2/TJ)

Ex post monitored parameters:

Parameter	*Unit*	*Verified monitored values in current monitoring period*
$X_{NRB,bl,y}$	69.63 %	Fraction of non-renewable biomass in baseline scenario in year y. This input is calculated as per methodology AMS-II.G, accepted by GS /17/.

For VPA 2.

Parameter	**Unit**	**GRM**	**ITYF**
$B_{bl,y}$	kg/stove/day	6.391	15.631
NCV_{wood}	TJ/ton wood	0.156	0.0156
X_{NRB}	Fraction	69.63%	70.41%
EF_{bl,bio,CO_2}	tCO_2/TJ	112	112
$EF_{bl,bio,non\ CO_2}$	tCO_2/TJ	8.692	8.692
BE_y	tCO_2e/stove /year	3.154	7.739

Ex-Ante Parameters:

Parameter	NCV wood
Default values used:	0.0156 TJ/ t
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories /30/

Parameter	EF_{bl,bio,CO_2}
Default values used:	112 tCO_2/TJ
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories.

Parameter	$EF_{bl,bio,non\ CO_2}$
Default values used:	8.692 tCO_2/TJ
Data Source:	This parameter is the sum of EF CH_4 (7.5 tCO_2/TJ and EF

	N_2O 1.192 tCO_2/TJ)

Ex post monitored parameters:

Parameter	*Unit*	*Verified monitored values in current monitoring period*
$X_{NRB,bl,y}$	69.63 % (GRM) 70.41% (ITYF)	Fraction of non-renewable biomass in baseline scenario in year y. This input is calculated as per methodology AMS-II.G, accepted by GS /17/.

For VPA 3:

Parameter	**Unit**	**GRLL**	**GRA**	**ITYF**
$B_{bl,y}$	kg/stove/day	10.524	6.250	11.069
NCV_{wood}	TJ/ton wood	0.156	0.156	0.0156
X_{NRB}	Fraction	69.31%	70.32%	69.63%
EF_{bl,bio,CO_2}	tCO_2/TJ	112	112	112
$EF_{bl,bio,non\ CO_2}$	tCO_2/TJ	8.692	8.692	8.692
BE_Y	tCO_2e/stove /year	5.173	3.112	5.463

Ex-Ante parameters:

Parameter	NCV wood
Default values used:	0.0156 TJ/ t
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories /30/.

Parameter	EF_{bl,bio,CO_2}
Default values used:	112 tCO_2/TJ
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories.

Parameter	$EF_{bl,bio,non\ CO_2}$
Default values used:	8.692 tCO_2/TJ
Data Source:	This parameter is the sum of EF CH_4 (7.5 tCO_2/TJ and EF N_2O 1.192 tCO_2/TJ).

Ex post monitored parameters:

Parameter	*Unit*	*Verified monitored values in current monitoring period*
$X_{NRB,bl,y}$	69.63 % (ITYF) 70.32 % (GRA) 69.31% (GRLL)	Fraction of non-renewable biomass in baseline scenario in year y. This input is calculated as per methodology AMS-II.G, accepted by GS /17/.

Project emissions are calculated as follows:

$$PE_y = B_{pj,y} * \left(X_{NRB,pj,y} * EF_{pj,bio,CO2} + EF_{pj,bio,nonCO2}\right) * 365/1000$$

Where:

$B_{pj,y}$ Daily mass of woody biomass combusted per stove in project scenario in both seasons in year y

$X_{NRB,pj,y}$ Fraction of non-renewable biomass in project scenario in year y

$EF_{pj,bio,CO2}$ CO_2 emission factor for biomass

$EF_{pj,bio,nonCO2}$ Non-CO_2emission factor for biomass

Verified inputs are as follows:

For VPA1:

Parameter	Unit	ITYF
$B_{bl,y}$	kg/stove/day	4.934
NCV_{wood}	TJ/ton wood	0.0156
X_{NRB}	Fraction	69.63%
EF_{bl,bio,CO_2}	tCO2/TJ	112
$EF_{bl,bio,non\ CO_2}$	tCO2/TJ	8.692
PE_y	tCO2e/stove /year	2.435

Ex-Ante Parameters:

Parameter	NCV wood
Default values used:	0.0156 TJ/ t
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories /30/

Parameter	EF_{bl,bio,CO_2}
Default values used:	112 tCO_2/TJ
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories.

Parameter	$EF_{bl,bio,non\ CO_2}$
Default values used:	8.692 tCO_2/TJ
Data Source:	This parameter is the sum of EF CH_4 (7.5 tCO_2/TJ and EF N_2O 1.192 tCO_2/TJ)

Ex post monitored parameters:

Parameter	*Unit*	*Verified monitored values in current monitoring period*
$X_{NRB,bl,y}$	*69.63 %*	Fraction of non-renewable biomass in baseline scenario in year y. This input is calculated as per methodology AMS-II.G, accepted by GS /17/

For VPA 2.

Parameter	Unit	GRM	ITYF

B_{py}	kg/stove/day	4.978	5.415
NCV_{wood}	TJ/ton wood	0.156	0.0156
X_{NRB}	Fraction	69.63%	70.41%
EF_{bl,bio,CO_2}	tCO_2/TJ	112	112
$EF_{bl,bio,non\ CO_2}$	tCO_2/TJ	8.692	8.692
PE_Y	tCO_2e/stove /year	2.457	2.77

Ex-Ante Parameters:

parameter	NCV wood
Default values used:	0.0156 TJ/ t
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories /30/

parameter	EF_{bl,bio,CO_2}
Default values used:	112 tCO_2/TJ
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories.

parameter	$EF_{bl,bio,non\ CO_2}$
Default values used:	8.692 tCO_2/TJ
Data Source:	This parameter is the sum of EF CH_4 (7.5 tCO_2/TJ and EF N_2O 1.192 tCO_2/TJ)

Ex post monitored parameters:

Parameter	*Unit*	*Verified monitored values in current monitoring period*
$X_{NRB,bl,y}$	69.63 % (GRM) 70.36% (ITYF)	Fraction of non-renewable biomass in baseline scenario in year y. This input is calculated as per methodology AMS-II.G, accepted by GS /17/.

For VPA 3:

Parameter	**Unit**	**GRLL**	**GRA**	**ITYF**
$B_{pj,y}$	kg/stove/day	4.531	5.743	5.731
NCV_{wood}	TJ/ton wood	0.0156	0.0156	0.0156
X_{NRB}	Fraction	69.31%	70.32%	69.63%
EF_{bl,bio,CO_2}	tCO_2/TJ	112	112	112
$EF_{bl,bio,non\ CO_2}$	tCO_2/TJ	8.692	8.692	8.692
BE_Y	tCO_2e/stove /year	1.852	2.860	2.019

Ex-Ante Parameters:

parameter	NCV wood
Default values used:	0.0156 TJ/ t
Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories /30/

parameter	EF_{bl,bio,CO_2}
Default values used:	112 tCO_2/TJ

Data Source:	2006; IPCC Guidelines for National Greenhouse Gas Inventories.

parameter	$EF_{bl,bio,non\ CO_2}$
Default values used:	8.692 tCO_2/TJ
Data Source:	This parameter is the sum of EF CH_4 (7.5 tCO_2/TJ and EF N_2O 1.192 tCO_2/TJ)

Ex post monitored parameters:

Parameter	*Unit*	*Verified monitored values in current monitoring period*
$X_{NRB,bl,y}$	69.63 % (ITYF) 70.32 % (GRA) 69.31% (GRLL)	Fraction of non-renewable biomass in baseline scenario in year y. This input is calculated as per methodology AMS-II.G, accepted by GS /17/.

As demonstrated in the registered PoA, any leakage is associated to the PoA or associated VPAs. Hence, this parameter is confirmed to be zero by the DOE.

Finally, ERs are calculated as follows:

$$ER_y = \left\{ \sum_{bl,pj} CWCP_{pj,y} * U_{pj,y} * WS_{pj,bl,y} * NCV_{wood} * \left(f_{NRB,y} * EF_{bio,CO2} + EF_{bio,nonCO2}\right) * E_{pj} * 365 \right\} - \sum LE\ pj$$

Where:

$\sum_{bl,pj}$	Sum over all relevant (baseline bl/ project pj) couples
$CWCP_{pj,y}$	Cumulative number of ICS included in the project database for project scenario pj and crediting in year y
$U_{pj,y}$	Cumulative usage rate for ICS in project scenario pj in year y, based on cumulative adoption rate and drop-off rate revealed by usage surveys
$WS_{pj,bl,y}$	Wood savings for an individual ICS of project scenario pj against an individual stove of baseline scenario bl in year y
NCV_{wood}	Net calorific value of wood
f_{NRB}	Fraction of biomass that can be established as non-renewable
$EF_{bio,CO2}$	CO_2 emission factor for wood
$EF_{bio,nonCO2}$	Non-CO_2 emission factor for wood
E_{pj}	Eligibility factor of the ICS implemented in project scenario pj
LE_{pj}	Leakage for project scenario pj

Note: This formulae was updated from the one included in the methodology as per continuous improvement of GS and applied since the past verification. Its applicability has been confirmed through e-mail and interview from GS Regional Manager /16/ , equation is based on the methodology "Technologies and practices to

Displace Decentralized Thermal Energy Consumption" /16/, scenario 1 of the methodology is taken into account: "When the baseline fuel and the project fuel are the same and the baseline emission factor and project emission are considered the same, the overall GHG reductions achieved by the project activity in year y are calculated as follows":

It is clear that the baseline fuel and project emission fuel are the same (wood) and baseline emission factor and project emission factor ($\boldsymbol{EF_{bio,CO2}}$ $\boldsymbol{and}$ $\boldsymbol{EF_{bio,nonCO2,}}$) are as well the same, hence formulae is applicable.

Means of verification of parameters:

Cumulative number of ICS included in the project database for preject scenario Pj and crediting year y ($CWCP_{pj,y}$)

$$\boldsymbol{CWCP_{pj,y}} = \frac{\left(\sum_j \boldsymbol{I_{i,y}} * \boldsymbol{m_{i,y}}\right)}{\boldsymbol{12}}$$

Where:

$\boldsymbol{I_{i,y}}$	Number of ICS implemented in the month i, year y
$\boldsymbol{m_{i,y}}$	Number of crediting months in the year y for the ICS installed in the month i

Inputs are calculated on tab CWCP of every ER calculation of each VPA, the tab contain calculations which are based on records which determines the total of ICS implemented per month. Raw data is taken from the tab "list of end users" and considers inputs as "user name, date of installation and the amount of months considered for the current monitoring period".

Cumulative number of ICS included in the project database for project scenario pj and crediting in year y ($\boldsymbol{U_{pj,y}} = \sum_k \boldsymbol{U_{pj,k,y}} * \boldsymbol{n_{k,y}}$)

Based on the cumulative proportion if ICS of age category *k* crediting in year *y*. Parameter is calculated in the ER reductions' tab of every VPA.

Wood savings for an individual ICS of project scenario *pj* against an individual stove of baseline scenario *bl* in year *y* $\boldsymbol{WS_{pj,bl,y}} = \sum_k \boldsymbol{WS_{pj,bl,k}} * \boldsymbol{n_{k,y}}$.

This parameter is calculated in the "wood savings" tab of ER calculation excel files, the statistical analysis used is the "90/30 rule", due to the sample is higher than 20 samples and the end points of the 90% confidence interval are within ± 30% of the estimated samples, meaning overall emission reductions can be calculated on the basis of the estimated mean annual emission reduction per unit of mean wood savings per unit, i.e:

$$\boldsymbol{WS_{pj,bl,k}} = \bar{\boldsymbol{x}}_{\boldsymbol{B_{bl,y}}} - \bar{\boldsymbol{x}}_{\boldsymbol{B_{pj,k}}}$$

Otherwise, wood savings are estimated as per the lower bound of the confidence interval of a t-student test (which is more conservative than a normal one) as follows:

$$\boldsymbol{WS_{pj,bl,k}} = \left\{\bar{\boldsymbol{x}}_{\boldsymbol{B_{bl}}} - \bar{\boldsymbol{x}}_{\boldsymbol{B_{pj,k}}}\right\} - \boldsymbol{t} * \sqrt{\frac{\boldsymbol{s^2_{B_{bl,y}}}}{\boldsymbol{n_{B_{bl,y}}}} + \frac{\boldsymbol{s^2_{B_{pj,k}}}}{\boldsymbol{n_{B_{pj,k}}}}}$$

Where:

t	Critical value from the Student table
$\boldsymbol{s^2_{B_{bl}}}$	Sample variance of wood consumption in baseline scenario bl
$\boldsymbol{n_{B_{bl}}}$	Sample size of wood consumption in baseline scenario bl

$s^2_{B_{pj,k}}$ Sample variance of wood consumption in project scenario pj for ICS of age category k

$n_{B_{pj,k}}$ Sample size of wood consumption in project scenario pj for ICS of age category k

The nonrenewable fraction of bio mass is considered as the minimum value between the non-renewability status of woody biomass fuel in year y in project scenario and baseline scenario:

$$f_{NRB} = \min\left(X_{NRB\,pj,y}, X_{NRB,bl,j}\right)$$

Finally, the eligibility factor is designed by Microsol to only include ICS which fulfill all requirements established by the program, as ICS without a chimney, beneficiaries that not used wood as baseline fuel and those ones which not used a traditional cookstove in baseline. Hence, Ey is determined as follows:

$$E_y = n_{PSKS_y} - \frac{NE_y}{n_{PSKS_y}}$$

Where:

n_{PSKS_y} Sample size of PSKS in year y

NE_y Proportion of non-eligible beneficiaries

Summary of ER, per VPA is as follows:

VPA 1:

	ITYF	TOTAL
ER 2013 (t/year)	41,986	41,986
ER 2014 (t/year)	41,090	41,090
Total	**83,076**	**83,076**

VPA 2:

	ITYF	GRM	TOTAL
ER 2013 (t/year)	120,939	3,280	124,238
ER 2014 (t/year)	118,404	2,533	121,370
Total	**293,342**	**5,813**	**245,608**

For VPA 3:

	ITYF	GRA	GRLL	TOTAL
ER 2013 (t/year)	5,393	1,113	26,411	32,917
ER 2014 (t/year)	5,127	1,077	25,973	32,177
Total	**10,520**	**2,190**	**52,384**	**65,094**

In conclusion, the DOE verified that all parameters including default parameters and monitored parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done as per GS continuous feedback received from GS /15/16/17/.

3.4.2 Assessment of actual emission reductions with the estimate emission reductions in PDD

Emission reductions to be claimed are higher than the ones expected in the VPAs, reasons to explain the increase are as follows:

a) Amount of stoves increased from 24,097 in the expected baseline to 31,138 in 2012. Increment was approved by GS in 2012. /47/.
b) The age of the stove was determined by a survey /9/ instead of provide a default value, considering the time that the stove is used and the maintenance (replacing of the combustion chamber) /10/. Age of the stove is determined considering both factors.
c) A realistic Seasonality factor has been taken into account compared with the ex- ante estimation inputs where dry season were only considered.
d) GWP increased from 21 to 25, as per IPCC fourth assessment period. /32/

Those explanations justify the increasing in Emission Reductions; however PP shall demonstrate in future verifications that instrument used to measure the amount of wood employed on site was correctly calibrated, justifying that lack of calibration increased the ER to be claimed by registering erroneous data.

The reason of increasing of CER's than the actual for the current monitoring period is been justified by the PP and the same have been verified and accepted by the Verification team.

Estimated Emission Reduction as per Registered/Approved VPAs:	VPA1: 29,182 tCO_2e VPA2: 23,738 tCO_2e VPA3: 48,370 tCO_2e Total: 101, 290 tCO_2e
Actual Emission Reduction for the Monitoring Period	VPA1: 83,076 tCO_2e VPA2: 245,608 tCO_2e VPA3: 65,094 tCO_2e Total:393,778 tCO_2e
Is any increase of CER's occurred?	Yes
Reason for Increase of CER's	Please refer to further discussion some paragraphs above.

In summary, verification team confirms that actual emission reductions is higher than the estimate of the registered/approved PDD or the actual emission reduction is higher than the estimate of the registered/approved PDD for the current monitoring period.
The cause for the increase of CER's than the actual for the current monitoring period is been justified by the PP and the same is been verified and accepted by the Verification team.

3.5 Issues remaining from the validation/previous verification period

FARs raised from previous verification were addressed correctly, as follows:

1.At the next verification, it is requested to ensure that monitoring and emission reductions calculation approach are in line with the following points:

a. The KTs shall be carried out by selecting a random sample without any preference for age group of project cook stoves. In addition, the latest applicable project KTs shall only be applied to estimate average fuel consumption in project scenario.
b. As stated in the applied methodoloy, either a KT must be carried out at a time of year which gives a conservative result, or a seasonal KT must collect data on a further instance in the year appropiate. Therefore, the PP shall make sure that baseline and project KTs are representative and meets this condition

.

This factor is now determined during the surveys and wood consumption is monitoredas well. i.e amount of wood was monitored by dry and wet season, instead of assume a predetermined factor.
2) At the next verification, it is requested to ensure that the drop off estimation approach is in line with the applied methodology or approved deviation.

3) "At the next verification, it is requested that the PP shall include and/or revise the question(s) in KS to ensure that post installation maintenance services are being provided by each LPP and that the cook stoves are in good shape. In addition, the PP shall submit the copy of maintenance records of random months for each LPP to GS during next issuance. It is strongly recommended that the verification DOE shall assess the maintenance services for individual LPPs based on on-site observation, end-user interviews, KS and random maintenance record."

The process of monitoring the maintenance has been implemented. Maintenance is performed by substituting the combustion chamber of ICS. Evidence, which includes impacted beneficiaries, was given to the DOE. /10/

Hence, the DOE confirms that FARs were correctly addressed and considers the FARs closed.

3.6 Status of implementation of continuous input/ Grievance mechanism & feedback received

Changes to the registered program of activities and VPAs have happened regarding the monitoring procedure as continuous feedback from GS. Despite a formal request to permanent changes has not been former requested to the Secretariat of the Gold Standard, all of them have been approved as observed through mails from the GS Regional Manager. Those changes and references are showed below:

- Monitoring frequency of Kitchen Survey (KS): It is not necessary to monitor this parameter every three months, but before the verification /15/.
- Statistical analysis: Utilization of the 90 interval of confidence plus ±30 % of estimated mean /16/.
- Calculation of NRB parameter, as per UNFCCC methodology AMS II G /17/.
- Also, a change in the design of the PoA was approved by GS; 9000 new ICS can be included as part of the design of the project activity.

Appendix A

GS-CDM Verification protocol

Qori Q'oncha- Improved Cookstoves Diffusion Programme in Peru

to Report No. 9105080524 9105080524

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Implementation					
1.1 Have all physical features proposed in the registered VPA-DD been implemented at the project site?	/1/4/	I	Yes, site visit confirmed that projects are implemented as per registered GS PoA and VPA- DD.	OK	OK
1.2 Has the project activity been operated in accordance with the project scenario described in the registered VPA-DD and relevant guidance?	/1/4/	I	Yes, site visit confirmed that projects are operating as per registered GS PoA and VPA- DD.	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?	/1/4/	DR	Yes, each monitoring report per VPA- DD contains the starting date of the crediting period.	OK	OK
1.4 Is the start date of monitoring period consistent?	/1/4/	DR	Yes, starting date of each VPA- DD falls into the crediting period as follows: Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA-DD- DD 1; 4th monitoring period: 14/05/2013-10/08/2014. Starting date of crediting period: 15/11/2008 (7 years renewable) Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA-DD- DD 2; 3rd monitoring period: 14/05/2013-10/08/2014 Starting date of crediting period: 20/03/2010 (7 years renewable) Qori Q'oncha – Improved Cookstoves Diffusion Programme in Peru – VPA-DD- DD 3; 2nd monitoring period:	OK	OK

[1] MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
			14/05/2013-10/08/2014 Starting date of crediting period: 20/03/2010 (7 years renewable)		
1.5 Is the monitoring report consistently filled with respect to all sections as required by its guideline of filling the monitoring report?	/1/4/6/	DR	CL 1 As per reviewed during the site visit several changes were identified between the GS-MR and the registered PoA and VPA- DD- DDs, related to the monitoring frequency, sampling method, fraction calculation of NRB (non-renewal biomass) and emission factors applied in the current monitoring period. Thus, the PP is requested to clarify why this actual changes to implementation and/or monitoring in the project activity were not identified in the section B.2 Post registration changes of the MR. Furthermore a clarification is required from PP regarding changes are in line with the Gold Standard procedures (Annex AA).	~~CL1~~	OK
1.6 Does the ER's obtained for the monitoring period within the limit of estimate in the registered PDD? Request for justification for higher estimated ER if not clarified.	/1/4/5/6/	DR	CL2. PP is requested to clarify how "aging factor" was determined and how the value obtained was used in determined ERs calculations. Furthermore, clarify which kind of maintenance was done to ICS to increase (instead of decrease) this parameter.	~~CL2~~	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.7 Is the monitoring system provided in line diagrams showing all relevant monitoring points?	/1/	DR	Line diagrams are not applicable for the current PoA and associated VPA- DD-DDs	OK	OK
2. Monitoring plan and methodology					
2.1 Is the monitoring plan established in accordance with the monitoring methodology?	/1/4/6/	DR	Yes, monitoring plan is as per monitoring methodology.	OK	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 GS?	/1/4/6/	DR	Implemented monitoring plan is as per monitoring methodology.	OK	OK
2.2.1 Have the above changes to the monitoring plan been approved by the GS?	/1/4/6/	DR	This point is not applicable.	OK	OK
3. Monitoring and the monitoring plan					
3.1 Is monitoring established in full compliance with the monitoring plan, contained in the registered PDD (or new monitoring plan approved by the GS)?	/1/6/	DR	No, please refer to CL1.	~~CL1~~	OK
3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant GS decisions?	/1/6/	DR	Yes, baseline emissions have been updated as per monitoring methodology and GS decisions.	OK	OK
3.2.1 Was the monitoring equipment for baseline emission parameters controlled and monitoring results recorded as per approved frequency?	/1/6/	DR	Yes, monitoring equipment is in line with monitoring plan of the registered VPA-DD- DD.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.2.2 Was the monitoring equipment for baseline emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/1/6/	SV	CL 3: As per site visit, it was observed that a different type of balance is used in the project activity vs the stated in the GS-MR, where it is described that a clock type balance in installed rather that an electronic balance, as was verified by the audit team. CL 4: The PP is requested to clarify if any calibration has been done to the balance used on site. Please provide evidence, to support your response.	~~CL3, CL4~~	OK
3.3 Are all project emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant GS decisions?	/1/6/	DR	Yes, parameters for project emissions are as per monitoring methodology and relevant GS decisions.	OK	OK
3.3.1 Was the monitoring equipment for project emission parameters controlled and monitoring results recorded as per approved frequency?	/1/6/	DR	No, please refer to FAR 1: PP is requested to provide proper evidence regarding calibration frequency of the scales; In case a calibration of scales was necessary for the current monitoring period, PP shall apply UNFCCC or GS applicable calibration guidelines.	FAR1	FAR 1
3.3.2 Was the monitoring equipment for project emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	/1/6/	DR	No, please refer to CL 4	~~CL 4~~	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant EB decisions?	/1/6/	DR	It is demonstrated that Leakage is zero for all VPAs. (Please refer to section 3.4.2), hence, this value is not applicable.	OK	OK
3.4.1 Was the monitoring equipment for leakage emission parameters controlled and monitoring results recorded as per approved frequency?	/1/6/	DR	It is demonstrated that Leakage is zero for all VPAs. (Please refer to section 3.4.2), hence, this value is 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?	/1/6/	DR	It is demonstrated that Leakage is zero for all VPAs (please refer to section 3.4.2), hence, this value is not applicable.	OK	OK
3.5 Were all monitoring parameters available and verifiable through the whole monitoring period?	/1/5/	DR	Yes. All monitoring parameters are available and verifiable through the whole monitoring period	OK	OK
3.5.1 In case, only partial monitoring data is available and PP(s) provide estimations or assumptions for the rest of data, was it possible to verify those estimations and assumptions?	/1/5/	DR	All data is available, hence, this condition is not applicable.	OK	OK
3.6 Was management and operation system established and operated in accordance with the monitoring plan?	/1/	DR	Yes, management and operation system is established and operated as per registered monitoring plan.	OK	OK
3.7 Was is it possible to verify that involved management and operation personal is fully aware of the responsibilities and perform all operations according to the registered monitoring plan and internally developed manuals?	/1/	DR	Yes, management and operation personal perform their responsibility as per monitoring plan.	OK	OK
3.8 Does the monitoring system provide organizational structure, role and responsibilities, emergency procedures?	/1/	DR	Yes, monitoring system provide role and responsibilities. Due to the nature of the project activity, emergency procedures do not apply.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
3.9 Does any uncertainties identified and addressed?	/1/	DR	Yes, uncertainties are properly identified and addressed, please refer to monitoring section.	OK	OK
4. Parameters					
4.1 GHG emission parameters					
4.1.1 **Monitored parameter** Title: $B_{bl,y}$ Indication: Mass of woody biomass combusted per stove in the baseline in year y. Units: kg/day/stove Estimated value (*ex-ante*): 3.44 t/year/stove Measured value (*ex-post*): VPA1: Cluster ITYF: 10.101 kg/day/stove VPA2: Cluster ITYF: 15.711 kg/day/stove Cluster GRM: 6.391 kg/day/stove VPA3: Cluster ITYF: 11.069 kg/day/stove Cluster GRA: 6.250 kg/day/stove Cluster GRLL: 10.524 kg/day/stove	/1/5/6/	DR	Cross-check with independent source: the input was cross checked against raw data. The input is based on measurements of sample of cluster, done on site. $B_{bl,y}$ is measured as per GS recommendations.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Monitored parameter Title: $B_{pj,y}$ Indication: Mass of woody biomass combusted per stove in the project in year y. Units: kg/day/stove Estimated value (*ex-ante*): 2.13 t/year/stove Measured value (*ex-post*): VPA1: Cluster ITYF: 4.934 kg/day/stove VPA2: Cluster ITYF: 5.415 kg/day/stove Cluster GRM: 4.978 kg/day/stove VPA3 Cluster ITYF: 4.092 kg/day/stove Cluster GRA: 5.743 kg/day/stove Cluster GRLL: 3.768 kg/day/stove	/1/5/6/	DR	Cross-check with independent source: The input was cross checked against raw data. The input is based on measurements of sample of cluster, done on site. $B_{pl,y}$ is measured as per GS recommendations.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Monitored parameter Title: $X_{NRB,bl,y}$ Indication: Non-renewability status of woody biomass fuel in year y in baseline scenario. Units: % Estimated value (*ex-ante*): Cluster ITYF: 0.696 Cluster GRA: 0.688 Cluster GRLL: 0.695 Measured value (*ex-post*): VPA1: Cluster ITYF: 69.63% VPA2: Cluster ITYF: 70.36% Cluster GRM: 69.63% VPA3 Cluster ITYF: 69.63% Cluster GRA: 70.32% Cluster GRLL: 69.31%	/1/5/6/	DR	CL 5 PP is requested to explain if parameter $X_{NRB,bl,y}$ was recalculated following methodology' procedures (3rd party) and provide related evidence.	~~CL 5~~	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Monitored parameter Title: $X_{NRB,pl,y}$ Indication: Non-renewability status of woody biomass fuel in year y in project scenario. Units: % Estimated value (*ex-ante*): Cluster ITYF: 0.696 Cluster GRA: 0.688 Cluster GRLL: 0.695 Measured value (*ex-post*): VPA1: Cluster ITYF: 69.63% VPA2: Cluster ITYF: 70.43% Cluster GRM: 69.63% VPA 3: Cluster ITYF: 69.63% Cluster GRA: 70.32% Cluster GRLL: 69.31%	/1/5/6/	DR	CL 6 PP is requested to explain if parameter $X_{NRB,pl,y}$ was recalculated following methodology' procedures (3rd party) and provide related evidence.	~~CL 6~~	OK
Monitored parameter Title: $\mathbf{I_{i,y}}$	/1/5/6/	DR	Inputs were cross checked against the raw data, transparent data analysis and	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Indication: Represents the number of stoves installed in month i by each LPP whose effective installation and date of installation can be evidenced. Date of installation shall be used for calculating each stove crediting period. Units: Stove installed/cluster/month Estimated value (*ex-ante*): This is not defined Measured value (*ex-post*):			reporting is confirmed.		

	ITYF	GRA	GRLL
July-10	0	0	0
August-10	0	0	0
September-10	0	0	1
October-10	0	0	69
November-10	0	15	479
December-10	0	37	716
January-11	0	163	604
February-11	0	281	915
March-11	0	313	871
April-11	0	128	284
May-11	0	64	45
June-11	0	216	154
July-11	0	381	112
August-11	0	567	76
September-11	0	668	128
October-11	0	616	1668
November-11	0	475	1650
December-11	0	407	1790
January-12	2	105	1821

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
February-12 0 213 817 March-12 0 473 823 April-12 0 105 220 May-12 0 213 80 June-12 0 400 5 July-12 83 426 0 August-12 384 395 0 September-12 287 122 0 October-12 745 12 12 November-12 2293 41 265 December-12 0 13 592 January-13 0 0 455 February- 13 0 0 86 March- 13 0 0 31 **TOTAL 3,794 6,849 14,769**					
Monitored parameter Title: $\mathbf{U_{pj,y}}$ Indication: Cumulative usage rate for ICS in project scenario pj in year y, based on cumulative adoption rate and drop-off revealed by usage surveys. Units: Fraction (%) Estimated value (*ex-ante*): 12%	/1/5/6/	DR	Inputs were cross checked against the raw data, transparent data analysis and reporting is confirmed.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Measured value (*ex-post*): VPA1: Cluster ITYF 2013: 100.00 % Cluster ITYF 2014: 100.00 % VPA2: Cluster ITYF 2013: 99.89% Cluster ITYF 2014: 99.31% Cluster GRM 2013: 89.25 % Cluster GRM 2014: 82.99% VPA3 Cluster ITYF 2013: 99.43% Cluster ITYF 2014: 100.00% Cluster GRA 2013: 96.63% Cluster GRA 2014: 96.98% Cluster GRLL 2013 : 100.00% Cluster GRLL 2014: 100.00%					

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Monitored parameter Title: O_y Indication: Represents the removal rate of the baseline stoves in each cluster. Units: Fraction (%) Estimated value (*ex-ante*): Measured value (*ex-post*): VPA1: Cluster ITYF: 100.00 % VAP2: Cluster ITYF: 97.89 % Cluster GRM: 63.43% VPA3: Cluster ITYF: 99.40 % Cluster GRA: 70.18 % Cluster GRLL: 90.96 %	/1/5/6/	DR	Inputs were cross checked against the raw data, transparent data analysis and reporting is confirmed.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Monitored parameter Title: $A_{l,y}$ Indication: Fraction (%) for a one year period. Units: Fraction (%) Estimated value (*ex-ante*): Measured value (*ex-post*):	/1/5/6/	DR	Please refer to CL 2	~~CL 2~~	OK
Monitored parameter Title: DNH parameter - Corruption Indication: Fraction % of carbon incomes subject to corruption or suspicion of corruption Units: N/A Estimated value (*ex-ante*): N/A Measured value (*ex-post*): N/A	/1/5/6/	DR	PoA and associated VPA complies with principles of Do Not Harm Declaration, Hence, this parameter is not applicable.	OK	OK
4.1.2 **Default parameters** Fixed ex ante parameter Title: $EF_{bl.bio,CO2}$ (Applies for all VPAs) Indication: CO_2 emission factor arising from use of wood fuel in baseline scenario Units: $tCO_2/t\_biomass$ Default/Used value: 1.7472 tCO2/t wood (=112.0 tCO2/TJ * 0.0156 TJ/ t)	/1/5/6/	DR	As per 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Tables 1.2/1.4	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Default parameters : Fixed ex ante parameter (Applies for all VPAs) Title: $EF_{pj.bio,CO2}$ Indication: CO_2 emission factor arising from use of wood fuel in project scenario Units: $tCO_2/t\_biomass$ Default/Used value: 1.7472 tCO2/t wood (=112.0 tCO2/TJ * 0.0156 TJ/ t)	/1/5/6/	DR	As per 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Tables 1.2/1.4	OK	OK
Default parameters. Fixed ex ante parameter (Applies for all VPAs) Title: $EF_{bl.bio,non-co2}$ Indication: Non-CO_2 emission factor arising from use of wood fuel in baseline scenario Units: tCO_2/t_wood Default/Used value: 0.13562 tCO_2eq/t wood = (0.117tCO_2eq/t wood (CH_4 emission) + 0.0186tCO_2eq/t wood (N_2O emission))	/1/5/6/	DR	As per default emission factors: 2006 Guidelines for National greenhouse Gas Inventories, Vol. 2, Ch. 2, Table 2.5 And for global warming potentials: IPCC Fourth Assessment Report: Climate Change 2007, Table 2.14:	OK	OK

[2]This value has been updated following UNFCCC last updates.

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Fixed ex ante parameter (Applies for all VPAs) Title: **$EF_{pj.bio,non-co2}$** Indication: Non-CO_2 emission factor arising from use of wood-fuel in project scenario Units: tCO_2/t_wood Default/Used value: 0.1356 tCO_2eq/t wood	/1/5/6/30/31	DR	As per default emission factors: 2006 Guidelines for National greenhouse Gas Inventories, Vol. 2, Ch. 2, Table 2.5 And for global warming potentials: IPCC Fourth Assessment Report: Climate Change 2007, Table 2.14.	OK	OK
4.2 Sustainability indicators					
Indicator: 1(Applies for all VPAs) Air quality. Monitoring frequency: biennially Estimation of baseline situation of parameter: reduction of 90%	/1/5/6/	DR,SV	No changes to this development indicator after implementation of the PoA. - The parameter is measured biennially. - Reduction of pollutants has reached values over 90% for all VPAs. - The social impact is positive, due to it affects directly to the health of the beneficiaries of the PoA.	OK	OK
Indicator: 2(Applies for all VPAs) Quality of employment. Monitoring frequency: biennially Estimation of baseline situation of parameter: 0	/1/5/6/	DR,SV	CL 9: Please clarify how the "number of employment" is a suitable indicator for this parameter.	~~CL 9~~	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Indicator: 3(Applies for all VPAs) Livelihood of the poor Monitoring frequency: biennially Estimation of baseline situation of parameter: 0	/1/5/6/	DR,SV	No changes to this development indicator after implementation of the PoA. The parameter is measured biennially. Implementation of the PoA had a positive impact, due to PoA help to secure the basic necessities of people impacted by the program.	OK	OK
Indicator:4(Applies for all VPAs) Access to affordable and clean energy services. Monitoring frequency: biennially Estimation of baseline situation of parameter: 0	/1/5/6/	DR,SV	No changes to this development indicator after implementation of the PoA. The parameter is measured biennially. Implementation of the PoA had a positive impact, due to PoA help to improve quality of life of beneficiaries of the program.	OK	OK
Indicator:5(Applies for all VPAs) Human and institutional capacity. Monitoring frequency: biennially Estimation of baseline situation of parameter: 0	/1/5/6/	DR,SV	No changes to this development indicator after implementation of the PoA. The parameter is measured biennially. Implementation of the PoA had a positive impact, because training to build and operate the ICS supported the institutional capacity of impacted communities.	OK	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
Indicator:6(Applies for all VPAs) Quantitative employment and income generation Monitoring frequency: biennially Estimation of baseline situation of parameter: 0	/1/5/6/	DR,SV	No changes to this development indicator after implementation of the PoA. The parameter is measured biennially. Implementation of the PoA had a positive impact, because jobs related to the activity have been created.	OK	OK
Indicator:7 (Applies for all VPAs) Technology transfer and technology self-reliance Monitoring frequency: biennially Estimation of baseline situation of parameter: 0	/1/5/6/	DR,SV	No changes to this development indicator after implementation of the PoA. The parameter is measured biennially. Implementation of the PoA had a positive impact, knowledge of building have been given to beneficiaries.	OK	OK
5. Calculations					
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?	/1/6/	DR	Please refer to CL2 CL 4 CL 5 CL7 CL 8	~~CL2~~ ~~CL4~~ ~~CL5~~ ~~CL7~~	OK
5.2 Have all the calculations related to the project emissions	/1/6/	DR	Please refer to CL 6	~~CL6~~	OK

Checklist question	Ref.	MoV[1]	Findings, comments, references, data sources	Draft conclusion	Final conclusion
been carried according to the formulae and methods described in the registered PDD and applied methodology?			CL8	~~CL 8~~	
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?	/1/6/	DR	Yes, calculation of leakage is not applicable for the current PoA	OK	OK

Table 2:List of Requests for Corrective Action (CAR) and Clarification (CL)					
No.	Type of request	Observation	Reference (Table 1)	Summary of project owner response	Verification team conclusion
1.	CL 1	As per reviewed during the site visit several changes were identified between the GS-MR and the registered PoA and VPA- DD-DDs, related to the monitoring frequency, sampling method, fraction calculation of NRB (non-renewal biomass). Thus, the PP is requested to clarify why this actual changes to implementation and/or monitoring in the project activity were not identified in the section B.2 Post registration changes of the MR. Furthermore a clarification is required from PP regarding changes are in line with the Gold Standard procedures (Annex AA).		As explained in the emails sent to DOE on August 4th and 7th entitled "QQ Verificacion - documentacion para el desk review", the current way monitoring frequency, statistical analysis, NRB fraction calculation and emission factors are dealt with represents changes as compared to the initial PoA documentation. All these changes have been discussed and approved by the Gold Standard as presented in the evidences already sent (e-mail exchanges between Microsol and Ivan Hernandez provided in the email sent to DOE on August 7th). No design changes procedures have been requested by the Gold Standard. The Gold Standard accepted to discuss these changes via email since they were either upgrades to the last version of the methodology (monitoring frequency, statistical analysis, NRB fraction calculation) or updates of the IPCC data (emission factors). Nevertheless, all these changes were officially approved in former verifications since they have been applied for corresponding issuances. We discussed by phone with Ivan Hernandez on August 26th the DOE clarification request and he confirmed that all these changes have	PP participants provided evidence (an e mail) regarding the approval from Gold Standard to different changes without request permanent changes to the registered PoA. As this situation is approved by Gold Standard, the DOE considers the point CLOSED.

				already been approved by the Gold Standard as well as applied in previous verifications. Therefore it is not necessary to discuss it again in the section B.2 of MRs since the goal of this section is to discuss new post-registration changes that have not already been approved. You will find in the new package attached the confirmation email that Ivan Hernandez sent us on August 26th after our phone call (entitled "Qori Q'oncha 4ta verificacion - cambios realizados despues del registro del PoA").	
2.	CL 2	PP is requested to clarify how "aging factor" was determined and how the value obtained was used in determined ERs calculations. Furthermore, clarify which kind of maintenance was done to ICS to increase (instead of decrease) this parameter. Finally, explain the exclusion of this parameter ($A_{i,y}$) in MR		As explained in the MRs Annex entitled "FAR from previous verification" (Annex 2 in MR VPA1 / Annex 3 in MR VPA2 / Annex 4 in MR VPA3), the Gold Standard rejected during 3rd Verification issuance review the ageing factor approach previously used to take into account the evolution of the stoves performance throughout time. In its 3rd Verification issuance review, the Gold Standard asked us to remove the ageing factor parameter from our calculation method and to adapt the latter accordingly for the next verification (i.e. the 4th Verification). As a result, the ageing factor does not appear anymore in the ER calculation and the wood saving is now calculated by ICS age category. This enables us to calculate an average wood saving value representative of the quantity of ICS of each age category being credited in the monitoring period. Thus to summarize: - The ageing factor parameter has been applied and approved during 3rd	The DOE considers the response satisfactory; hence this point is considered CLOSED.

				Verification. All the ER calculations have been done using this parameter. Please refer to the 3rd Verification documentation (MRs, ER calculations Excels, GS issuance review) that has already been provided in the email sent on August 4th (entitled "QQ Verificacion - documentacion para el desk review"). - The ageing factor has been removed from the calculation method for 4th Verification as requested in the FAR. Please refer to section E.4 of the MRs for detailed equations explaining the new calculation methodology. - The reference made to ageing factor in section E.6 of the MRs has been corrected. Concerning the increase of ICS efficiency in the case of some age categories it is mainly due to maintenance activities realized by the LPPs. For instance, the LPP ITYF has replaced all the combustion chambers of VPA 1 stoves and is finalizing the replacement of all VPA 2 stoves combustion chambers. A new paragraph has been added concerning realized maintenance activities in the Annex of the MRs (page 34 of MR VPA1 and pages 37 and 41 of MR VPA2 – see new package attached).	
3.	CL 3	As per site visit, it was observed that a different type of balance is used in the project activity vs the stated in the GS-MR, where it is described that a clock type balance in installed rather that an electronic balance, as was verified by the audit team.		Indeed since early 2013, all the balances used by the LPPs to perform Kitchen tests are electronic ones, no more clock type weighing balances are used. This balance replacement enables more precision in the data collection. The information has been corrected in section	The DOE considers this response satisfactory and hence the point is closed.

				D.2 of the MRs (see new package attached).	
4.	CL 4	The PP is requested to clarify if any calibration has been done to the balance used on site. Please provide evidence, to support your response.		All the balances used are now electronic ones and have an automatic calibration system. The button "TARE" enables to reset and auto-calibrate the balance before each weighing (a photo of the balance buttons is provided in the new package). No additional calibration has been required since the balances were produced.	CLOSED. PP provided technical support of scales, however calibration frequency of scales cannot be clarified. In this context, FAR 1 was raised by the DOE. Please refer to table 3.
5.	CL5	PP is requested to explain if parameter $X_{NRB,bl,y}$ was recalculated following methodology' procedures (3rd party) and provide related evidence.		As it has been reminded in CL 1, the calculation method of NRB fraction has been modified before the 2nd Verification. The Gold Standard accepted that we use the last cookstoves methodology (Technologies and Practices to Displace Decentralized Thermal Energy Consumption - TPDDTEC) approach to calculate the fNRB fraction (evidence already provided in the email sent to DOE on August 7th entitled "QQ Verificacion - documentacion para el desk review"). This methodology proposes two options to calculate the fNRB fraction, we selected the second one, i.e. the approach similar to CDM methodology AMS II.G v02 based on the Demonstrably Renewable woody Biomass concept. As a consequence, since 2nd Verification we apply TPDDTEC methodology requirements concerning NRB fraction calculation. This methodology does not require in the QA/QC procedures to provide 3rd party study and reports (as in cookstoves methodology v1), it only requires a "transparent data analysis and	Explanation provided by PP is considered correct by the DOE, hence this point is CLOSED.

				reporting" and we comply with it.	
6.	CL 6	PP is requested to explain if parameter $X_{NRB,pl,y}$ was recalculated following methodology' procedures (3rd party) and provide related evidence.		See response to CL 5.	Explanation provided by PP is considered correct by the DOE, hence this point is CLOSED.
7.	CL 7	A confidence interval of 90/30 is defined in the MR of VPAs to calculate the emission reductions. The PP is requested to support with evidence how the defined error (30%) is in line with GS recommendations or decision.		As it has been reminded in CL 1, the Gold Standard accepted before 1st Verification that we apply the last cookstoves methodology (TPDDTEC) approach for statistical analysis, i.e. the 90/30 rule (evidence already provided in the email sent to DOE on August 7th entitled "QQ Verificacion - documentacion para el desk review"). Therefore this rule has already been applied and approved by the Gold Standard three times. Please refer to the ER calculations Excels from the 3rd Verification (already provided in the email sent on August 4th entitled "QQ Verificacion - documentacion para el desk review") to see that we apply in this 4th Verification the exact same method to calculate the 30% error.	Evidence regarding the acceptance of method was provided by PP to the DOE, hence this point is CLOSED.
8.	CL8	PP is requested to clarify why equations used to calculate BE and PE differ from the ones included in the methodology, and registered VPA.		As explained in the MRs Annex entitled "FAR from previous verification" (Annex 2 in MR VPA1 / Annex 3 in MR VPA2 / Annex 4 in MR VPA3), the Gold Standard raised various FARs during the 3rd Verification issuance review concerning our ER calculation method. The Gold Standard asked us to adapt it with regards to the ageing factor, seasonality factor and drop-off rate for the next verification (i.e.	The DOE confirms that this is a requirement raised by the Gold Standard, hence this point is CLOSED.

				the 4th Verification). As a consequence: - The ER calculation includes now a usage rate instead of the initial drop-off rate. The usage rate calculation considers if the improved cookstove is not used at all or not used on daily basis. The parameter is weighted to be representative of the quantity of cookstoves of each age being credited. - The ER calculation does not include ageing factor anymore: all the process of wood savings calculation is now made by age category of the improved cookstoves. We calculate an average wood saving value representative of the quantity of ICS of each age category being credited in the monitoring period. - The ER calculation does not include seasonality factor anymore: wood savings are calculated separately for each season. These three changes were required by the Gold Standard in the 3rd Verification issuance review, this is why equations used to calculate ERs differ from the ones included in the registered methodology.	
9.	CL 9	Please clarify how the "number of employment" is a suitable indicator for this parameter.		The Sustainable Development Matrix parameter 'Quality of employment' is estimated based on the number of permanent jobs created by the project activity. This differs from the parameter 'Quantity of employment' which is estimated by the total number of jobs (permanent and seasonal) created by the project activity.	The DOE is in agreed with the explanation provided by PP, hence this point is CLOSED.

				These indicators have been defined in the GS Passports at the moment of PoA registration, validated by the Gold Standard at that time and thus cannot be modified. In any case it has been specified in the Sustainable Development Matrix of each LPP that the parameter corresponds to the number of permanent jobs created (see Annex 1 in MR VPA 1 / Annexes 1 and 2 in MR VPA2 / Annexes 1, 2 and 3 in MR VPA3 of the new package attached).	
10.	CL 10	Please clarify why "the proportion of the DRY season" in the spreadsheet is chosen as 0.5 for ER calculation		The proportion of dry season is 0.5 because Peru has two seasons that lasts 6 months each. This is based on a FAO document (http://www.fao.org/ag/AGP/AGPC/doc/counprof/Peru/Peru.htm) and has already been validated during 2 and 3rd verifications by the respective DOE and GS.	Proper evidence has been provided by PP, hence this point is closed.
11.	CL 11	In "Sheet PSKS"of the GRLL-spreadsheet provided, for Cell GA17~GA20, the usage rate is not calculated based on all sampled ICS, please check the formulae.	/22/	The cells have been corrected correspondingly (see "GRLL - ER calculation - v3" attached) but this had no implication on the ER calculation figures.	Workbook has been amended, hence this point is CLOSED.
12.	CL 12	In the ER calculation sheet of GRM, two wood savings of dry season is assumed as half of those of wet season to be conservative. However, from the results of other clusters of this PoA, the wood savings of dry season could be much lower than those of wet season, even below half. So please clarify how this approach can be justified as	/20/	Analysing the rest of ER calculations included under this periodic verification, parameter "Wood savings dry " is always higher that half of wet season inputs, Hence approach is conservative.	PP clarified that approach is conservative, due to wood savings dry is higher in the rest of the clusters, compared with the assumption done for GRM. Hence, this point is CLOSED.

		conservative.			
13.	CL 13	In the ER calculation sheet of GRM, one usage rate was based on a linear regression. However, the regression process is not presented with the spreadsheet.		A formula has been included in the cell 'GC19' in sheet PSKS (see "GRM - ER calculation – v4" attached) in order to present the regression trend used to estimate the Usage rate value of age category 5.	Uploaded version of GRM ER calculations have been provided to the DOE as evidence, hence this point is CLOSED.
14.	CL 14	In the ER calculation sheet of IYTF2, the result of eligibility factor is 100%. However, the calculation formula does not count the Column FS in "Sheet PSKS".		Please refer to MR section E.4 where it is explained in the definition of the Eligibility factor that "beneficiaries who did not use a traditional cookstove in baseline scenario should be monitored in order to calculate an adjustment factor. Whenever it would not be possible to perform such a specific monitoring MICROSOL would exclude this population from the emission reductions calculation". Yet ITYF 2 has implemented a specific baseline monitoring for non-traditional stoves (see sheet 'Comparison efficiency CT-CMNC) thus all ITYF2 beneficiaries, regardless of their baseline stove model (traditional or non-traditional) are eligible for crediting. This is why the Eligibility factor in sheet 'PSKS' does not include the column 'FS' in its formula. The cell 'FS2' in sheet 'PSKS' contains a specific comment for this issue.	Explanation provided by PP es considered adequate by the DOE, hence this point is CLOSED.
15.	CL 15	In the ER calculation sheet of IYTF2, Cell DO19 and DO28 of "Sheet BLKT" is not correctly linked to other values in the spreadsheet. Also it is not clear why these two corrective factors for dry and wet season are applied for baseline wood consumption.		Cells 'DO19' and 'DO28' in ITYF2 ER calculation sheet 'BLKT' have been corrected correspondingly (see "ITYF 2 - ER calculation – v4" attached). These two corrective factors have been designed to take into account the difference of proportion of the two baseline stove models	Workbook has been amended and link is working correctly, attached to inputs in the same excel file. Also, explanation regarding the corrective factors the corrective factors is

				between the sample populations of Baseline surveys (BLKS) and Baseline Kitchen tests (BLKT). The proportion that needs to be taken into account in the ER calculation is the one calculated based on the BLKS because the sample size is much more larger and thus the results are more representative: 71.26% of traditional stoves / 28.74% of non-traditional stoves. The samples on which BLKT were realized present different proportions of baseline stove models: in rainy season 47% of traditional stoves and 53% of non-traditional stoves in dry season 39% of traditional stoves and 61% of non-traditional stoves. It is thus necessary to apply corrective factors so as the BLKT results are representative of the traditional/non-traditional stoves proportion in the total population. These corrective factors have already been validated during 3rd verification by the respective DOE and GS.	satisfactory and already applied in latest verification. Hence, this point is CLOSED.
16.	CL 16	For cluster GRM of VPA2 and GRA of VPA3, the removal rate is below 80%. Please clarify why leakage L5 is counted as zero. Is there any incentive scheme implemented by the PP?		At PoA-DD level leakage n°5 has been defined as null because in the case where end users keep using their baseline stoves in parallel to the ICS, the corresponding wood consumption is accounted for in the PSKT. Indeed the PSKT measure the total wood consumption of the families, including eventual remaining stoves or other stove use. Thus no leakage related to the use of baseline stoves takes place. The monitoring of the removal rate is presented in the analysis of leakage L5 as an indicator of the progressive abandon of the baseline stoves	PP clarified that L5 is defined as cero at PoA level, explanation included here and in the poA is satisfactory, Regarding the removal rate, explanation is satisfactory and proportion will be encouraged to reach higher rates, however, this point is not compulsory. Hence this

				by the end users. The parameter L5 does not depend on the removal rate value; it has been defined as L5 = 0 at PoA level. Concerning the removal rate values, the PoA-DD stated indeed that is should be at least equal to 80%. Since GRM and GRA present lower values, they will both be asked to implement additional sensitization activities to encourage beneficiaries to remove their baseline stoves (but they cannot make it compulsory). This has been specified in section E.3 of both MRs (see VPA 2 and VPA 3 MRs attached).	point is CLOSED.
17.	CL 17	In the ER calculation sheet of GRLL, the calculation of eligibility factor does not count all the sampled ICS.		The Eligibility factor formula has been amended, see "GRLL - ER calculation – v4"	ER calculations has been amended, hence this point is CLOSED.
18.	CL 18	The f_{NRB} of Cluster GRLL in baseline scenario for this monitoring period is listed as 69.31% while it is 69.29% in the previous MR of VPA3. Meanwhile, in the In the ER calculation sheet of GRLL, only 14,575 end users are counted for the calculation of f_{NRB} while the whole list covers 14,769 users.		As presented in section D.2 of the MR, two NRB fraction parameters are monitored, one for baseline scenario (XNRB,bl,y) and the other one for project scenario (XNRB,pj,y). The one for project scenario is newly calculated at each verification based on the updated beneficiaries list of the LPP. In case the two values are not the same, we select the smallest one in order to be conservative (this is what has been applied for ITYF VPA2 project). During the 3rd verification, the NRB fraction values for baseline and project scenarios of GRLL differed (XNRB,bl,y = 69.31% and XNRB,pj,y= 69.29%), thus the most conservative parameter had been applied (XNRB= 69.29%). However, for this 4th verification, the NRB	The source of f_{NRB} of Cluster GRLL has been explained correctly, It is explained in the section D.2 of the monitoring report and confirmed by PP in the response. Also, there is any mistake regarding number of beneficiaries used to calculate ER. Hence, this point is CLOSED.

				fraction values for baseline and project scenarios of GRLL are equal (69.31%), thus no corrective measure needed to be taken. This explains why the NRB fraction value of GRLL has changed in comparison to 3rd verification. We do not see where, in the ER calculation sheet of GRLL, only 14,575 end users are counted for the calculation of NRB fraction. In the cell 'P40' of sheet 'NRB' the number of end users accounted for is 14,769.	

Table 3: List of forward action requests (FARs)				
FAR number	Observation	Reference	Summary of project participants' response	Verification team conclusion
FAR1	PP is requested to provide proper evidence regarding calibration frequency of the scales; In case a calibration of scales was necessary for the current monitoring period, PP shall apply UNFCCC or GS applicable calibration guidelines.		We take note of the FAR and will implement before next verification a calibration assessment of the scales. If the calibration assessment shows that the scales error is beyond the maximum permissible error according to GS or UNFCCC applicable guidelines, corresponding corrective actions will be taken during next issuance.	Response is accepted, and requirement will be verified in the next period.

Appendix B

Certification statement

to the Verification Report 01 996 9105080524

Certification statement

TUV Rheinland (China) Ltd., the DOE, has performed the verification of the registered GS program activity "GS Registration №1005", "Qori Q´oncha-Improved Cook stoves Diffusion Programme in Peru. The project activity is designed to generate emission reductions by improving cook stoves.

The project participants is 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 DOE does not express any opinion on the selected baseline scenario or on the validated and registered PoA. The verification is carried out in-line with the GS requirements and rules.

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, ii) the collection of evidence supporting the reported data and iii) emission reductions that are claimed is free from material errors, omissions or misstatements.

The verification is based on:

- Registered GS PoA-DD version 9, dated on 11/01/2011

— The Gold Standard, "Indicative Programme, Baseline, and Monitoring Methodology for Improved Cook-stoves and Kitchen Regimes" V.01
— Previous verification report, version No: 7772-11/59, dated on 2011-09-19

— Monitoring reports: QQ VPA1 - MR - MP4 - v5 dated on 05/03/2015, QQ VPA2 - MR - MP3 - v5, dated on 24/10/2014 and QQ VPA3 - MR - MP2 - v4 dated on 24/10/2014.

This statement covers verification period for all VPAs from 14/05/2013 to 10/08/2014,

Verified emission reductions in the above monitoring period:

VPA1: 83,076 tCO_2e
VPA2: 245,608 tCO_2e
VPA3: 65,094 tCO_2e
Total:393,778 tCO_2e

The DOE has raised 19 clarification requests, all of which have been successfully resolved by PPs. Forward action requests have been also raised and shall be addressed and verified during the next periodic verification.

The DOE considers 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 / revised approved monitoring plan contained in the registered PDD/revised approved PDD are fairly stated.
The DOE, hereby conclude that the project activity is in line with all relevant requirements of the UNFCCC and Gold Standard rules and certifies that the project activity, achieved emission reductions by sources of GHG equal to 83, 076 tCO_2 for VPA 1, 245,608 tCO_2 for VPA 2 and 65,094 tCO_2 for VPA3 equivalent and all monitoring requirements have been fulfilled.

The DOE states that the claimed emission reductions are free from material errors, omissions and misstatements with a reasonable level of assurance.

2015/04/24 Date	2015/04/21 Date	2015/04/17 Date
Mr. Henri Phan DOE Manager TUV Rheinland (China) Ltd.	Danae Diaz Technical Reviewer TUV Rheinland Mexico Ltd.	Arturo Lemus Team Leader TUV Rheinland Mexico

Appendix C

CERTIFICATES OF COMPETENCE

Qualification

Lemus Martinez-Estape, Rafael Arturo /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 13 - Waste handling and disposal		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	04/08/2014	Valid to: (Gültig bis)	04/07/2017

Remarks:	Valid for TA 1.2, 13.1
Languages:	Spanish English

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring: (letzte Beurteilung)	Next Monitoring: (nächste Beurteilung)

Remarks:

History of scope allocation

Date:	2011-07-07

Change:	EAC CDM, CDM added
By:	Manfred Brinkmann
Reason:	Valid for TA 1.2, 13.1

History

Created:	30/06/2011 09:06:28 a.m.	Luis Javier Cerecedo/Mex/TUV
Modified:	18/07/2014 10:16:13 a.m. ZE8	Henri Phan/Chn/TUV
	10/05/2012 03:39:17 p.m.	Arturo Lemus/Mex/TUV
	10/05/2012 03:35:53 p.m.	Arturo Lemus/Mex/TUV
	08/05/2012 03:53:10 p.m.	
	03/05/2012 10:33:34 p.m. ZE8	
	07/07/2011 03:42:19 p.m. ZE9	
	07/07/2011 03:39:54 p.m. ZE9	
	30/06/2011 09:06:42 a.m.	

Export to ICMS

Last Export:

Qualification

Ramos Soto, Lauro Jaime /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒	Qualification Level: (Qualifikationsstufe)	Auditor
External: (Externer)	☐	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes
EAC Scopes: (EAC Branchen)	CDM 05 - Chemical industry CDM 01 - Energy industries (renewable - / non-renewable sources)		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	06/01/2013	Valid to: (Gültig bis)	05/01/2016

Remarks:	TA 5.1 and TA 1.2
Languages:	Spanish English

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

View / Edit Monitoring

History of scope allocation

Date:	2014-07-14
Change:	EAC CDM added
By:	Henri Phan
Reason:	

Date:	2013-02-04
Change:	EAC CDM added
By:	Praveen Urs
Reason:	

History

Created:	25/01/2013 10:31:31 a.m.	Luis Javier Cerecedo/Mex/TUV
Modified:	21/07/2014 09:48:32 a.m. ZE8	Henri Phan/Chn/TUV
	11/07/2014 10:24:25 a.m. ZE8	Henri Phan/Chn/TUV
	04/02/2013 01:06:13 p.m. ZE8	Praveen Urs/Chn/TUV
	04/02/2013 01:05:45 p.m. ZE8	
	25/01/2013 10:31:46 a.m.	

Export to ICMS

Last Export:

Qualification

LIU, Jia /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.: (AuditorenRegNr)			
Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 03 - Energy demand		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	09/10/2012	Valid to: (Gültig bis)	09/09/2015

Remarks:	T.A 1.2 and TA 3.1
Languages:	Chinese simplified English Cantonese

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring: (letzte Beurteilung)	Next Monitoring: (nächste Beurteilung)

Remarks:

View / Edit Monitoring

History of scope allocation

Date:	2014-06-18
Change:	EAC CDM added
By:	Henri Phan
Reason:	

Date:	2012-09-28
Change:	EAC CDM added
By:	Praveen Urs
Reason:	

History

Created:	09/10/2012 03:25:09 PM	Jasmine Liu/Hk/Chn/TUV
Modified:	06/18/2014 04:53:14 PM	Henri Phan/Chn/TUV
	06/13/2014 05:23:35 PM	Harold Hai/Hk/Chn/TUV
	09/28/2012 04:33:30 PM	Jasmine Liu/Hk/Chn/TUV
	09/10/2012 03:26:18 PM	

Export to ICMS

Last Export:

Qualification

Diaz, Danae /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒	Qualification Level: (Qualifikationsstufe)	Auditor
External: (Externer)	☐	Add. reviewer: (Zusätzlicher Prüfer)	☒ yes
EAC Scopes: (EAC Branchen)	CDM 13 - Waste handling and disposal CDM 01 - Energy industries (renewable - / non-renewable sources)		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	27/10/2011	Valid to: (Gültig bis)	26/10/2014

Remarks:	Valid for TA1.2, 13.1 and 13.2
Languages:	Spanish English Portuguese

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

History of scope allocation

Date:	2012-04-04
Change:	EAC CDM added
By:	Praveen Urs
Reason:	
Date:	2011-10-28
Change:	EAC CDM added
By:	Manfred Brinkmann
Reason:	

History

Created:	24/10/2011 04:22:30 p.m.	Luis Javier Cerecedo/Mex/TUV
Modified:	04/04/2012 06:31:36 p.m. ZE8	Praveen Urs/Chn/TUV
	04/04/2012 06:30:03 p.m. ZE8	Manfred Brinkmann/Jpn/TUV
	13/12/2011 10:02:33 a.m. ZE9	Manfred Brinkmann/Jpn/TUV
	28/10/2011 07:22:36 a.m. ZE9	
	24/10/2011 04:22:41 p.m.	

Export to ICMS

Last Export:

Qualification
Mr. Gonzalo Sandoval

Emission Trading
United Nations Framework Convention on Climate change

Appointed:	☒		
		Qualification level:	Technical Expert
External:	☒		
Scopes:	1 Energy industries (renewable / non renewable 3 Energy demand 13 Waste handling and disposal		

Scope:	1.2; 3.1;
Languages:	Spanish English
Legal requirements	☒

Validity:

First Appointment	14 October 2014	Valid To:	13 October 2017

Approved By:

Mr. Henri Phan	

History of Scope Allocation:

Date:	
Change:	
By:	
Reason:	