

Gold Standard Verification Report

“Proyecto Mirador Enhanced distribution of Improved Cookstoves in
Latin America”

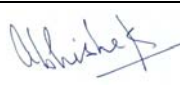
GS PoA Project No. 1988

Monitoring Period: 01/12/2013 – 30/11/2014

for
Proyecto Mirador Foundation

Report Ref No. GS.VER.14.12 MP05 version 1.1

Executive Summary:

A) Basic information			
PoA title	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America		
VPA title	Distribution of Dos por Tres Cookstoves in Honduras		
GS registration number	PoA 1988		
UNFCCC ref number	N/A		
Date of registration	29/06/2010 for the project activity		
Sectoral scope	3: Energy Demand		
Methodology/ies applied	Improved Cook-stoves and Kitchen Regimes, Version 01 ("Methodology v.01")		
Project participant	Proyecto Mirador Foundation		
B) Verification			
Start date of crediting period	01/05/2009		
Monitoring Period	01/12/2013 – 30/11/2014		
Emission Reductions verified	189,486 tCO ₂ e		
C) Monitoring report	Version	Date	
Submitted to Earthood	1.0	29/10/2014	
Final	2.1	26/12/2014	
D) Verification report	Version	Date	
Draft	1.0	22/12/2014	
Final	1.1	29/12/2014	
E) Verification Team			
Team Leader	Siddharth Yadav		
Verifier	Siddharth Yadav		
Technical Expert (TA 3.1)	Ashok Kumar Gautam		
F) Approvals			
Technical Reviewer	Kaviraj Singh	Date	29/12/2014
Technical Expert (TA 3.1)	Ashu Sharma		
G) Final opinion			
Earthood has performed the verification of the GS PoA “Proyecto Mirador Enhanced Distribution of Improved Cookstoves” & VPA “ Distribution of Dos por Tres Cookstoves in Honduras” GS Ref. Number 1988. The verification includes confirming the implementation of the monitoring plan of the registered VPA DD version 1 and Passport version 1 and the application of the monitoring methodology ‘Improved Cook-stoves and Kitchen Regimes, Version 01 (“Methodology v.01”)’. Earthood confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. The emission reductions from the above referred GS project activity during the period 01/12//2013 – 30/11/2014 (including both days) amount to 189,486 tonnes of CO₂ .			
H) Authorization			
Quality Manager	Abhishek Mahawar		
Signature			
Date	29/12/2014		
I) Distribution			
No public distribution without written confirmation from client.			

Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
GS	Gold Standard
EB	Executive Board
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
PDD	Project Design Document
PoA	Programme of Activities
RMP	Revised Monitoring Plan
UNFCCC	United Nations Framework Convention on Climate Change

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1. INTRODUCTION

1.1 Objective

Proyecto Mirador Foundation has contracted Earthood Services Private Limited (Earthood) to conduct the verification and certification of emission reductions reported for the GS Programme of Activities (PoA) GS 1988 “Proyecto Mirador Enhances Distribution of Improved Cookstoves in Latin America” and VPA “Distribution of Dos por Tres Cookstoves in Honduras” for the monitoring period 01/12/2013 – 30/11/2014. This report contains the findings of the verification process and a certification statement for the certified emission reductions.

The verification is the periodic independent review and *ex post* determination by Earthood of the monitored reductions in GHG emissions that have occurred as a result of the registered GS PoA activity during a defined monitoring period. Certification is the written assurance by Earthood that, during a specific period in time, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the VPA “Distribution of Dos por Tres Cookstoves in Honduras” for the period 01/12/2013 – 30/11/2014.

1.2 Scope

The scope of the verification is to establish and verify that;

- a) The project activity has been implemented and operated as per the registered PoA-DD, VPA-DD and passport, and all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place.
- b) The monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of CERs, verifiable, and in accordance with applicable GS requirements.
- c) The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any revised approved monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;
- d) The data recorded and stored as per the monitoring methodology including applicable tool(s).

The verification report includes the following;

- a) Emission reduction
- b) Leakages
- c) Changes to the key sustainable development indicators
- d) Achievement and implementation of mitigation/compensation measures, according to the success indicators established in the monitoring plan of registered PDD and passport
- e) Response by project participants to the grievances raised by local stakeholders

2. METHODOLOGY

2.1 Desk Review

The verification is performed primarily as a desk review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols/checklists.

The assessment team cross checks the information provided in the documents (PoA-DD, VPA-DD, MR, GS passport) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under;

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

The complete list of documents reviewed is included under Section 5.

2.2 Site Visits

A site visit was undertaken by Earthood on 01/12/2014 - 05/12/2014 to carry out following;

- a. An assessment of the implementation and operation of the registered project activity as per the registered PoA-DD & VPA DD.
- b. A review of information flows for generating, aggregating and reporting the monitoring parameters including sustainability parameter
- c. Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PoA-DD & VPA DD.
- d. A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources.
- e. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PoA-DD & VPA-DD, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline.
- f. A review of calculations and assumptions made in determining the GHG data and emission reductions;
- g. An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
- h. Conducting a few follow-up interviews with local residents and/or NGOs to ensure that they still have positive feedback about the project
- i. Any changes that have occurred since the Validation and that have had an impact on the sustainable development aspects will need to be considered.
- j. Assessment of changes, if any, that may have an impact on The Gold Standard qualification of the project, particularly with reference to any potential changes in the key parameters that could lead to an overall negative impact on sustainable development of the project.
- k. Assess if the mitigation plan is being implemented and whether any negative impacts and risks are being effectively mitigated. Check that other negative impacts have not resulted due to the implementation and operation of the project.

2.3 Reporting of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and onsite assessment. The verification

team prepares and/or updates a verification protocol (internal document) that records the conformities and nonconformities, which may be of following types;

CAR (Corrective Action Request) is raised if one of the following occurs:

- a) Non-compliance with the monitoring plan, the methodology or the standardized baseline 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 that will impact the quantity of emission reductions
- d) Change to the key sustainable development indicators
- e) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is sufficient or not clear enough to determine whether the applicable GS requirements have been met. All CARs and CLs raised by the Earthood during verification shall be resolved prior to submitting a request for issuance.

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

All the findings that are raised and communicated to project participant during the verification are included under Section 6. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise.

2.4 Quality Control & Technical Review

A draft verification/validation report that is prepared by assessment team will be reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable Gold Standard and CDM requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team. The report approved by Quality Manager is endorsed by Managing Director, who is overall responsible to ensure quality, before final release. The further details of applicable procedures and responsibilities about Earthood Quality Management System (QMS) are available on its website (www.earthood.in).

3. VERIFICATION FINDINGS

This section summarises the findings of the verification.

3.1 Remaining Issues (FAR(s) from validation or previous verification)

There are no FAR(s) from validation or previous verification that need to be closed during this verification.

3.2 Project implementation

The project has been implemented in accordance with the registered Gold Standard PoA titled 'Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America, Version 01, dated 1 June 2013, and the corresponding VPA 'First VPA for Distribution of Dos por Tres Cookstoves in

Honduras'. VPA Design document is registered against methodology "Methodology for Improved Cook-stoves and Kitchen Regimes V.01.

Through the implementation of this project, the improved "Dos por Tres" stove replaces the traditional 'fogon' stove thereby contributing to a reduction in carbon emissions and improvement of environmental conditions of the local community as outlined in the registered design documents.

QA/QC procedures, as detailed in the registered Project Design Document have been followed during the implementation of the project. However, the discrepancies in the monitoring of parameters and monitoring approach in the monitoring report that are not consistent with the registered PDD in terms of unit and measurement procedures are discussed. The data/parameters that are monitored for the calculation of emission reductions are also discussed in the following sections.

CAR 1 was raised to discuss the Information (data and variables) provided in the monitoring report that is different from that stated in the registered VPA DD, however as this information has not caused any increase in the calculated emission reductions in the current monitoring period, CAR1 was closed and a FAR1 was issued to revise the VPA DD.

3.3 Project Design Change (non-material), if any

If there are no post registration changes that are identified during this monitoring period.

However, in 2012 Proyecto Mirador submitted a Design Change Request that was accepted & approved the Gold Standard Foundation. The Design Change Request asked for approval to use the Gold Standard methodology described in "Technologies and Practices to Displace Decentralized Thermal Energy Consumption" (11/04/2011), Annex 1, Section A1.3, "NRB Assessment similar to approach of CDM methodology AMS-IIG" to calculate the NRB fraction (an "NRB Exception"). In accordance with the approved 2012 Design Change Request, and in agreement with the subsequent verifications in 2012 and 2013, the reported per-stove emissions reduction figure of **3.31 mtCO₂e/year** is accepted, while it reflects an updated NRB of 77% using CDM Methodology AMS-IIG. The stove design has not changed and all other factors previously established remain valid.

A revision to the cluster definition was also approved as part of the 2012 Design Change Request in order to accommodate a boundary expansion to include all of Honduras.

3.4 Verification of monitoring parameters (Carbon)

The sections below describe how each parameter, which is measured according to the monitoring plan, has been verified to confirm that the actual monitoring complies with the monitoring plan, monitoring data has thoroughly been assessed and that the calibration requirements are met.

3.4.1 Number of stoves, ID8/Stove Sales

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Recorded on an ongoing basis on Salesforce.com installation data base /16,30/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	The stove sales record is maintained on Salesforce.com and includes the date of installation, beneficiary name, ID number, location, type of stove for all the households that receive a stove. The measuring and recording frequency of this parameter was found inline to the

	monitoring plan and methodology requirements /16,30/
Monitoring equipment	Salesforce software platform, recorded through GPS (Gramin), i phone with google applications, and crosschecked through government IDs (unique) /9/
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	There is no data transcription involved for the location determined through GPS weigh points, there are no accuracy requirements. The accuracy of the GPS device is +/-12ft ref. http://static.garmincdn.com/pumac/eTrex_10-20-30_OM_EN.pdf The ID for each stove is unique as this is the same as the govt. ID of the individual under whose name the stove is registered /9/.
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	N/A
Calibration frequency /interval:	No additional requirements on calibration
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	Verified Value: 83,562 total stoves. The verified number details are as follows: • 6,621 stoves installed in during 1 May 2009 – 11 November 2010 • 10,509 stoves installed during 1 December 2010 – 30 November 2011 • 17,000 stoves installed during 1 December 2011 – 30 November 2012

	• 24,484 stoves installed during 1 December 2012 – 30 November 2013 • 24,948 stoves installed during 1 December 2013 – 30 November 2014 Accessed the salesforce software on computers and random sampling checks done on site with the records /9/.
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in the MR was cross checked by doing on site surveys /9/
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, The central salesforce.com database is maintained by the top management, and quality checks are made for avoiding the possibilities of errors /9/

3.4.2 ID9/ B_{pj,y} Fuelwood consumed per household per year (Tonnes)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Biennial surveys were conducted /11-15, 28/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	The monitoring frequency is inline to the monitoring plan and monitoring methodology however, CAR02 was raised, and then closed following the justification provided by the client (refer CAR2 Section 06). Ref. to the file "Annex_01_Financing Plan 2014.xlsx" the figure 3.31 is applied only in the first year. Emission reduction figures for subsequent years are adjusted for aging (see "Assumptions" worksheet, Cells G15-G22).
Monitoring equipment	Manual surveys so no monitoring equipment in use /9/
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	N/A
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	N/A
Calibration frequency /interval:	N/A

Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	Reported value: 2126.47 Kg A copy of the survey conducted in 2013 was verified, also Dr. Rob Bailis, author of the report of survey results, was interviewed on site /9/
If applicable, has the reported data been cross-checked with other available data?	The survey is conducted by a third party and the value is comparable to the wood fuel consumed in regions under similar conditions.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, The values calculated by third party are used for emission reduction calculations and the study was conducted following adequate QA/QC procedures /14,28/.

3.4.3 ID 10/EF_{pj, bio, CO2} (tCO₂/tonne woody biomass). The CO₂ emission factor for use of the biomass fuel in the project scenario in the tonnes CO₂ per tonne of woody biomass fuel

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Same as reported in previous verification. Comment in VPA-DD: Value will be measured by same method biennially only if Verifier determines it necessary.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, there is no reason for us assessment team to believe that the value has changed significantly from the previous years because the determining parameters have not changed significantly

Monitoring equipment	Third party laboratory testing.
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Professor Rob Bailis (3 rd Party Expert from Yale University) was interviewed on 03/12/2014, he has confirmed "having reviewed the last 5 years of publications regarding emission factors in the region, and he confirmed saying that ' <i>I have observed that there is a fairly narrow bound of uncertainty for emission factors of CO₂.</i> '"
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes
Calibration frequency /interval:	N/A
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	Reported value: 98.3 g/MJ is the emission factor measured in laboratory testing of Estufa Dos por Tres model stoves. The reported values was verified by interviews and literature review /9/
If applicable, has the reported data been cross-checked with other available data?	Yes, literature review
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	No QA/QC procedures are applicable since the parameter is not monitored in the current monitoring period. Also, the measurement of this parameter is done by a third party lab and in house.

3.4.4 ID 11/ Stoves in use (Household)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Surveys are conducted on a sample group of at least 30 households for each age category of stove by year. 19337 household surveys conducted by Proyecto Mirador's staff during the current monitoring period. These surveys were checked by Earthood's teams. 126 households were checked by the verification team through site visits, The households comprised of stoves built since 2009 in order to confirm representativeness of the sample. The samples confirmed reported figures /9,25/.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes
Monitoring equipment	N/A
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	N/A
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	N/A
Calibration frequency /interval:	N/A
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A

Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	Drop-off figures were updated to reflect complete and accurate calculations as of November 30, 2014. The values listed in the MR are verified as follows: 15%, 4%, 2%, 8%, 31%, 19% It was discovered during the audit process that drop-off calculations in Salesforce.com were over stated because any stove found not in use at the time of the survey which were noted in a separate field as only temporarily out of use (i.e., away for the day, out of town, etc.) had been marked as “destroyed” when they were in fact working fine and in current use. These stoves were subsequently marked “intact” and thus the drops off results were corrected. The figures for year 2 were also corrected due to a data transcription error. The reported values are found okay during onsite visits and desk review /9/
If applicable, has the reported data been cross-checked with other available data?	Randomly selected households were visited to cross check the information available on salesforce platform /30,9/
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	GPS data point is captured for each stove and this information is also kept under the household record, and multiple GPS marks are captured for a single record to maximize accuracy of the marking /9/

3.4.5 ID 12/ Leakage (Household)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Surveys conducted on an ongoing basis.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, the survey is conducted as ongoing basis and results were tabulated on biannual /19/.
Monitoring equipment	N/A

Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	N/A
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	N/A
Calibration frequency /interval:	N/A
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	possible leakage effects, including: - Rebound Effect - Stimulation of increased use of a high emission fuel - Promotion of new stove type stimulates substitution of a cooking fuel or stove type with relatively high emissions - Loss of space heating causes users to use alternative sources of (and thus, a greater amount of) fuel - Traditional stoves are reused - Other types of stoves are present in the household - Length of time auxiliary stoves are used each day

	Households Reported value: 0 Verified value:0 6221 surveys conducted during the current MP encompassing all stoves built from January 1, 2014 to 28th April 2014. 184 surveys (hard copies) were reviewed /19,9/. 18 cases were reported not replacing a traditional stove, the primary reason for this is that these stoves were installed in newly constructed houses (0.29%). The auxiliary stoves were only in use an average of 35 minutes per day (Cell C19), whereas the Estufa Dos por Tres was in use an average of 8 hours per day. Also, given that the households using a Estufa Dos por Tres stoves as their primary fuel will continue to use with gas and electric fuels occasionally (for coffee making etc) if a traditional stove was in place. The value of 0.29% is considered de-minimus (also confirmed by Gold Standard's LATAM manager (e-mail dated 04/12/2014) /19,9/.
If applicable, has the reported data been cross-checked with other available data?	The assessment team while conducting the survey on site, randomly cross checked the information reported in MR and found consistent /9/.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	N/A

3.4.6 ID 13/ Leakage due to transportation (Kilo-meter)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Mileage records; Sales Database (for total # of stoves built per year) /1,26/ The monitoring plan states 'Significant emissions from transportation or other suggest more impact than if project did not exist'.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, the value is monitored as on-going basis and tabulated annually /26/
Monitoring equipment	N/A

Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	N/A
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	N/A
Calibration frequency /interval:	N/A
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	Reported Value: 407,622 Kms (Note: typo in VPA DD to be corrected to reflect SI units) For the Fifth Verification Period the ratio is 6.57%, well below the 15.61% baseline established in the First Verification Period. For the Fourth Verification Period the ratio is 7.64%, 0 leakage is acceptable as the transportation does not increase significantly beyond the relative increase in project activity. Thus, it is the ratio of stoves constructed: km driven that is relevant and accepted. Interviews, records and salesforce.com was verified and found consistent with the reported values in MR /9,26/

If applicable, has the reported data been cross-checked with other available data?	N/A
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes

3.5 Verification of Sustainability Monitoring Parameter

3.5.1 ID 14/ Number of individuals (Issue 1 Air Quality)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Assess agreement with statements in Sustainability Monitoring Plan Sections, Passport: Issue #1, Air Quality.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, 431 Leakage and Sustainability Surveys collected during the Fifth Verification Period. "Reported Results" worksheet within the file "Annex_10_Leakage Sustainability Results 2014.xlsx." 100% of respondents reported the air is cleaner in their homes with the new Dos por Tres cookstove (Cell C30).
How were the values in the monitoring report verified?	The value verified as 100%. Questionnaires, salesforce.com was used to verify the reported values /9,19,30/
If applicable, has the reported data been cross-checked with other available data?	Yes, through on site interviews and visual observation /9/.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes

3.5.2 ID 15/ number of individuals (Issue 7 livelihood of poor)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Ongoing Randomness of the sample is maintained

Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, Questionnaires are collected regularly and document (Annex_10_Leakage Sustainability Results 2014.xlsx.) submitted was verified /19/ • Respondents have more free time since having the Dos por Tres, representing a reduction in time spent collecting wood. Other reported uses of extra time include setting up a business; attending school (2%); helping their partner; resting, taking better care of children etc. /19/ • Respondents who purchase their fuelwood reported using the funds saved after installation of the 2x3 to purchase food. 9% reported using the funds to pay for electricity and 9% reported other uses /19/.
How were the values in the monitoring report verified?	The surveys were verified and the values reported on salesforce.com were verified /19/
If applicable, has the reported data been cross-checked with other available data?	Yes, through on site interviews and visual observation /9,19/.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, Questionnaires are administered by Supervisors and checked by the project manager on a regular basis /19/

3.5.3 ID 16/ Number of individuals (Issue#9 Human and Institutional Capacity)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Ongoing, randomness of the sample is maintained by surveying every nth beneficiary.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes, Questionnaires are collected regularly "Annex_10_Leakage Sustainability Results 2014.xlsx." respondents have more free time since having the Dos por Tres, representing a reduction in time spent collecting wood. Other reported uses of extra time include setting up a business; attending school (2%); helping their partner; resting, taking better care of children etc. • respondents who purchase their fuelwood reported using the funds saved after installation of the 2x3 to purchase food. 9% reported using the funds to pay for electricity and 9% reported other uses.

How were the values in the monitoring report verified?	The surveys were verified and the values reported on salesforce.com were verified
If applicable, has the reported data been cross-checked with other available data?	Yes, through on site interviews and visual observation
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, Questionnaires are administered by Supervisors and checked by the project manager on a regular basis

3.5.4 ID 17/ Number of individuals (Issue#6 Quality of employment)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	The parameter is monitored annually. Surveys of employees, management report on number of employees, and copies of training materials used by employees. Assess agreement with statement in Passport Sustainability Monitoring Plan Sections regarding wider social and economic impact of the project
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes results for Quality of Employment are tabulated in "Annex_11_Employee Survey Export.xlsx" and "Annex_12_Employee Survey Export Ejecutores.xlsx."
How were the values in the monitoring report verified?	The surveys were verified and the values reported on salesforce.com were verified
If applicable, has the reported data been cross-checked with other available data?	Yes, through document review, on site interviews and visual observation
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, Questionnaires are checked by the project manager on a regular basis

3.5.5 ID 18/Number of individuals (Issue #10 Quantitative employment and income generation)

Criteria/Requirements	Assessment/Observation

Measuring /Reading /Recording frequency	The monitoring is done on annual basis. Assess agreement with statement in passport Sustainability Monitoring Plan sections regarding wider social and economic impacts of the project.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes
How were the values in the monitoring report verified?	Surveys of employees, management report on number of employees, and copies of training materials used by employees were checked. Direct employees of PM at 1 May 2009 (start date of Gold Standard Crediting Period): 16 Direct employees of PM at end of 5 th Verification Period: 21 Total # of full time employees (both direct and indirect): 124 /20/
If applicable, has the reported data been cross-checked with other available data?	Annual written report of number of employees is a crosscheck for the record of employee surveys. /20,21,22/
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, employee surveys conducted by Human Resources Manager in Honduras are reported and reviewed by U.S. office /20,21,22/

3.5.6 ID 19 / Number of individuals (Issue #12: Technology Transfer)

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	The monitoring frequency is annual. Assess agreement with statements in Passport Sustainability Monitoring Plan Sections regarding wider social and economic impact of the project:
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology?	Yes
How were the values in the monitoring report verified?	Technology is transferred to beneficiaries prior to stove construction, during construction and follow-up visits conducted after stove installation. Each time a follow-up visit is conducted, a maintenance survey is recorded. Number of maintenance: 65,565 surveys were conducted surveys in 5 th Verification Period. Technology transfer to employees ranges from stove building practices to the use of state-of-the-art

	technology using Salesforce.com and hi-res GPS mapping on both iPhones and laptops. % of employees that report familiarity with work regulations: 100% % of employees who received job training in the past year: 83% Surveys of employees, management report on number of employees and copies of training materials used by employees were checked /20,21,22,23/
If applicable, has the reported data been cross-checked with other available data?	Interviews were conducted on site during site visits and offices based in Santa Barbara /9/
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, maintenance survey data collected on handheld devices, stored in Salesforce.com monitoring system and reviewed by office staff in Honduras and U.S. offices /9/

3.6 Data not monitored (ex-ante or external parameters)

3.6.1 ID 1/ $X_{nr,b,y}$ (%), The non-renewable fraction of the woody biomass harvested in the project collection area in year y in the baseline scenario

What is the value applied?	77%
How it was checked and is it correctly applied?	2011.pdf"); Yale 2007 Study and Yale 2009 Study Value determined ex-ante remains unchanged from the registered VPA DD /1,6/

3.6.2 ID 2/ $B_{bl,y}$ (tonnes) T woody biomass/year/household

What is the value applied?	3.87 tonnes per household
How it was checked and is it correctly applied?	Value determined ex-ante (baseline), 2010 Paired Fuelwood Consumption Study Data obtained during the 2010 Paired Fuelwood Consumption Study. The number 3.87 was calculated by taking the average fuelwood consumption for the baseline scenario expressed in kg per day, multiplying by 365 days/year and converting to metric tonnes. /1,6/
Description:	The mass of woody biomass consumed during cooking in the baseline scenario

3.6.3 ID 3/ EF_{bl,bio,CO_2} (tCO₂/t wood biomass), The CO₂ emission factor for use the biomass fuel in the baseline scenario

What is the value applied?	87.6 g/MJ is the emission factor measured in laboratory testing of traditional fogón stoves.
How it was checked and is it correctly applied?	Value determined ex-ante (baseline). Aprovecho Stove Test (28 April 2009) /1,6/

3.6.4 ID 4/ $EF_{bl,bio nonCO_2,CH_4, tCH_4}$ (tCH₄/t woody biomass), The CH₄ emission factor for use of the biomass fuel in the baseline scenario

What is the value applied?	0.47 g/MJ is the emission factor measured in laboratory testing of traditional fogón stoves
How it was checked and is it correctly applied?	Value determined ex-ante (baseline). Aprovecho Stove Test (28 April 2009). Data is obtained by use of the net calorific value (NCV) of wood 18.6 MJ/kg /1,6/.

3.6.5 ID 5/ $EF_{bl,bio,nonCO_2,N_2O}$, t N₂O/t woody biomass, The N₂O emission factor for use of the biomass fuel in the baseline scenario

What is the value applied?	0
How it was checked and is it correctly applied?	Value determined ex-ante. Aprovecho Stove Test (28 April 2009) /1,6/.

3.6.6 ID 6/ EF_{pe,bio,co_2} (tCO₂/t woody biomass), The CO₂ emission factor for use of the biomass fuel in the project scenario

What is the value applied?	98.3 g/MJ is the emission factor measured in laboratory testing of Estufa Dos por Tres model stoves.. Data is obtained by use of the net calorific value (NCV) of wood 18.6 MJ/kg /1,6/.
How it was checked and is it correctly applied?	Value determined ex-ante. Aprovecho Stove Test (28 April 2009) /1,6/

3.6.7 ID 7/ $EF_{pe,bio nonCO_2,CH_4}$ (tCH₄/t woody biomass) The CH₄ emission factor for use of the biomass fuel in the project scenario

What is the value applied?	0.05 g/MJ is the emission factor measured in laboratory testing of traditional fogón stoves.
How it was checked and is it correctly applied?	Value determined ex-ante. Aprovecho Stove Test (28 April 2009) /1,6/

3.7 Assessment of data and calculation of emission reductions

Emissions reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

ER_y Emission reductions in year y in tCO₂/year

PE_y Project emissions in year y in tCO₂/year

BE_y Baseline emissions in year y in tCO₂/year

LE_y Leakage emissions in year y in tCO₂/year

A value of 3.31 mtCO₂e/year per stove is used to reflect a 77% NRB ratio. This value reflects the calculation approach as per the registered VPA DD. The calculations are checked from "Annex_18_ER Calculations 2014.xls" ("ER-La Justa Improved" Worksheet, Cell C4).

The initial emissions reduction of 3.31 mtCO₂e/year per stoves in their first year of operation, multiplied by the average number of stoves in operation on a monthly basis is adjusted for aging and drop-off as set forth in "Annex_01_Financing Plan 2014.xlsx" for the Fifth Monitoring Period (1 December 2013 – 30 November 2014).

The emissions reductions uses a leakage of 0%. This value is obtained through qualitative surveys referenced in the discussion above "ID 12 / Leakage".

4. CERTIFICATION STATEMENT

Earthood Services Private Limited (Earthood), contracted by Proyecto Mirador Foundation, has performed the independent verification of the emission reductions for the GS PoA 1988 “ Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America” & VPA “Distribution of Dos por Tres Cookstoves in Honduras” in Honduras for the monitoring period 01/12/2013 to 30/11/2014 as reported in the Monitoring Report, Version 2.1 dated 26/12/2014. The ‘Proyecto Mirador Foundation’ is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity

Earthood commenced the verification on the basis of the baseline and monitoring methodology Improved Cook-stoves and Kitchen Regimes, Version 01 (“Methodology v.01”), the monitoring plan contained in the PoA/VPA DD Version 1.0 dated 01/06/2013 Monitoring Report Version 2.1 dated 26/12/2014 as per the methodology described under Section 2 of this report.

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

In our opinion the GHG emissions reductions reported for the project activity for the period 01/12/2013 - 30/12/2014 are fairly stated in the Monitoring Report (final) Version 2.1 dated 26/12/2014. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology referred above and the monitoring plan contained in the PoA/VPA DD Version 1.0 dated 01/06/2013.

Earthood Services Private Limited is able to certify that the emission reductions from the GS PoA activity 1988 “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America” & “VPA Distribution of Dos por Tres Cookstoves in Honduras” during the period 01/12/2013- 30/11/2014 (including both days) amount to **189,486 tCO₂e**. The emission reduction per vintage year is as follows;

- 01/12/2013 to 31/12/2013 = 13, 798 tCO₂e
- 01/02/2014 to 30/11/2013 = 175,688 tCO₂e

5. REFERENCES

5.1 Referred documents and evidences

S. No.	Title of Document (Version, Date, etc.)
1	PoA and VPA DD 1.0, 01/06/2013
2	VPA Validation Report, 2.0, 06/02/2014
3	PoA Validation Report, 1.0, 05/03/2014
4	VPA Passport, 1.0, 09/04/2014
5	PoA Passport, 1.0, 21/06/2014
6	Monitoring Report, 1.0, 29/10/2014, V02 17/12/2014
7	Monitoring Report (final), 2.1, 26/12/2014
8	ER Calculation Spreadsheet, 2.0, 17/12/2014
9	On site physical observation, surveys, interviews and review of information like records.
10	Financing Plan 2014.xlsx.
11	PM fuel usage study data .xlsx.
12	PM fuel usages study summery report pdf.
13	PM fuel usages study data sheet Spanish pdf.
14	PM fuel usages study data sheet English pdf.
15	PM fuel usages study guidelines pdf.
16	Sales records 120213-113014.xlsx.
17	Stoves Installation by Month 120113 to 113014 pdf.
18	Training Brochure pdf.
19	Leakage Sustainability Result 2014.xlsx.
20	Employee Survey Export .xlsx.
21	Employee Survey Export Ejecutores.xlsx.
22	Employee Questionnaires pdf
23	Quantitative Employment 2014.xlsx.
24	Berkeley Air NRB Analysis 2011 pdf
25	Drop off data 2014.xlsx
26	Transportation summary 2014.xlsx.
27	GS Aging approval email pdf.
28	Aging Stove KT data 2013. docx.
29	Aging Stove KT report 2012 docx.
30	Salesforce.com, installation data base for recording and archiving of project data

5.2 List of person interviewed

S. No.	Name	Designation	Organization	Date
1	Esther Adams	Program Manager	Proyecto Mirador Foundation	03/12/2014
2	Evans Hernandez	Technical Manager	Proyecto Mirador Foundation	03/12/2014
3	Rob Bailis	Associate Professor, Yale University	Yale University	03/12/2014
4	Emilia Mendoza	Director	Proyecto Mirador Foundation	03/12/2014
5	Elder Mendoza	Operations Director	Proyecto Mirador Foundation	04/12/2014

6. AUDIT FINDINGS (CAR/CL/FAR)

Type	Date	Reference
CAR1	01/12/2014	Monitoring report version 1
Description of the non-conformance		
The datasets presented in the monitoring report version 1 and the supporting annexures are not updated to the end date of the monitoring period i.e 30/11/2014. a) The revised version of the monitoring report and the supporting annexes reflecting the updated data and the corresponding emission reduction calculations should be provided b) The main changes between the version 1 and version 2 of the monitoring report should be listed. c) Typos/inconsistency between the figures quoted in GS registered VPA DD and MR should be corrected. For example: parameter ID2 (i.e., woody biomass per year per household consumed during the baseline scenario) shows a figure of 3.87 tons/HH. Whereas the registered VPA-DD states a figure of 3.97.		
Response from PP	Date	12/18/14
Updates have been made to address all points listed above, detailed as follows: a) The Monitoring Report and supporting annexes have been modified to reflect final figures that include stoves constructed through 30/11/2014. The modified version of the MR is submitted herewith, titled as follows: "Monitoring Report 5VP v2 121714.docx." It is accompanied by the final versions of all annexes. b) The main changes to the Monitoring Report between v1 and v2 are listed below: Page 6 1. Changed the number of total stoves installed (since 2004) from "over 87,500" to "over 83,000" in order to reflect final stove build numbers from October & November 2014. The final number of stoves built in the 5th VP is 24,948. It is smaller than predicted in the Monitoring Report v1 because October and November were spent training the Ejecutores and their technicians to implement a new system whereby an Inspector goes in advance to review various aspects of the site location where a stove is to be built. "Annex_01_Financing Plan 2014.xlsx," "Annex_07_Sales Record 120113-113014.xlsx" and "Annex_08_Stoves Installed by Month 120113-113014.pdf" have also been updated to include actual stove build numbers through the end of the 5th VP. Changed the number of direct and indirect employees from 74 to 124 to reflect current employment figures as of 30/11/2014 (as reflected on "Annex_14_Quantitative Employment 2014.xlsx"). Sustainability Parameter ID 14 (page 31) was also updated to reflect current employment figures. Page 7 1. KS New Territory Summary – corrected Annex numbers to 23 & 24 (instead of 15 & 16). Page 13 1. Changed the total number of stoves built during the 5th VP from 26,781 to 24,948 as justified		

above under Page 6.

2. Modified the description of GPS marking system to reflect the date beyond which GPS marking system was fully implemented (August 2012).

Page 16

Added 2 paragraphs to further articulate our assessment of leakage, as specifically pertains to certain instances where a fogon replaced a gas/electric stove.

Page 18

1. Changed the language regarding aging factors to reflect that no KPT was conducted in 2014.

Page 23: Parameter ID 8 – Stove Sales

1. The figure of 26,781 was previously listed as the total number of stoves built during the 5th VP; this has been revised to reflect actuals as discussed above. The final figure is 24,948 stoves installed from 1/12/13-30/11/14.

Page 24: Parameter ID 11 – Stoves in use

Drop-off figures were updated to reflect complete and accurate calculations as of November 30, 2014. The values listed in the MR changed only for Years 2 and 3 as follows:

OLD DROPOFF FIGURES	NEW DROPOFF FIGURES
15%, 3%, 3%, 8%, 31%, 19%	15%, 4%, 2%, 8%, 31%, 19%

It was discovered during the audit process that drop-off calculations in Salesforce.com were overstated because any stove found not in use at the time of the survey which were noted in a separate field as only temporarily out of use (i.e., away for the day, out of town, etc.) had been marked as “destroyed” when they were in fact working fine and in current use. These stoves were subsequently marked “intact” and thus the dropoff results were corrected.

Pages 28-29: Parameter ID 13 – Leakage due to Transportation

The old figure of 6.06% was changed to 6.57% to account for actual kilometers driven in October and November 2014, according to the updated “Annex 17_Transportation Summary 2014.xlsx.”

c) On the current Monitoring Report, Parameter ID2 (i.e., woody biomass per year per household consumed during the baseline scenario) shows a figure of 3.87 tons/HH; whereas the registered VPA-DD states a figure of 3.97. The original PDD as well as the revised version of the PDD v.5 (2012), which was the PDD in effect before PoA approval, states a value of 3.97 under Parameter ID2 as well. However, that figure does not account for the revised baseline study conducted in 2010, which returned a value of 3.87. Since the 2010 baseline study has been in use since the 1st Verification Period, the figure of 3.97 is erroneous. Unfortunately this error was carried forward to the VPA-DD, which still erroneously states 3.97. However, the Monitoring Report is correct, as it reflects the correct figure per the effective baseline survey updated 2010. This value of 3.87 has been accepted for all Monitoring Reports to date. The justification was explained under the comments section for Data/Parameter ID 2 (page 19) of the First Monitoring Report (submitted in 2010) as follows: *“Value above (3.87) differs from the value in the PDD (3.97) because the PDD was based on the Yale 2007 Study. Baseline information used in the PDD has been replaced with data obtained in the 2010 Paired Fuelwood Consumption Study as described in Section A.5 of the Monitoring Report.”* A screenshot of the relevant ID 2 from the MR v.01 is below:

Data / Parameter:	ID 2/ B_{bio}
Data unit:	T woody biomass/year/household
Description:	The mass of woody biomass consumed during cooking in the baseline scenario
Source of data used:	2010 Paired Fuelwood Consumption Study
Value applied:	3.87 tonnes per household
Indicate what the data are used for (Baseline/Project/ Leakage emission calculations)	Baseline
Justification of the choice of data or description of measurement methods and procedures actually applied:	Data obtained during the 2010 Paired Fuelwood Consumption Study. The number 3.87 was calculated by taking the average fuelwood consumption for the baseline scenario expressed in kg per day, multiplying by 365 days/year and converting to metric tonnes.
Any comment:	Value above (3.87) differs from the value in the PDD (3.97) because the PDD was based on the Yale 2007 Study. Baseline information used in the PDD has been replaced with data obtained in the 2010 Paired Fuelwood Consumption Study as described in Section A.5 of the Monitoring Report.

Thus, the Fifth Monitoring Report correctly states the 3.87 as the value applied under Parameter ID 2, and no revisions have been made to the MR. However, the VPA-DD has been modified to reflect the correct value of 3.87 (and to correct the source as the 2010 Fuelwood Consumption Study) and is attached herewith as "VPA-DD v2 Dec-14.docx."

Similarly, Parameter ID 9 (fuelwood consumed per household per year) in the VPA was erroneously carried over from the original PDD as 2.23 tonnes. The value of 2,126.47 kg reported in the MR is correct (although the data unit was shown as tonnes, and has now been restated as kg). The VPA has been modified accordingly to reflect a value of 2,126.47 kg (the value of 2,126.47 is substantiated in PP's response to CAR 2 below).

The final change to the VPA is to correct a typo in Parameter ID13 (Leakage due to Transportation). Mileage in Honduras is tracked in kilometers (not miles) so accordingly, the data unit was changed to "kilometers."

Assessment team opinion	Date	22/12/2014
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CAR1 closed following the justification above.

FAR1 - The revised VPA highlighting changes from the registered version should be submitted to Gold Standard Secretariat.

Type	Date	Reference
CAR2	04/12/2014	Monitoring report version 2
Description of the non-conformance		
The value of 2,126.47 kg has been reported in the MR does not match the value reported in 2013		

Biennial Fuelwood Consumption Study (Aging Stove KT). Please explain.		
The text in the comments section may need to be revised accordingly.		
Response from PP	Date	12/18/14
The value of 2,126.47 represents the initial project scenario fuelwood consumption figure and comes directly from the 2010 Fuelwood Consumption Study (see Cell K58 on "SUMMARY" worksheet). This figure is reassessed at least biennially (every 2 years) according to the Kitchen Methodology v.01 to determine aging factors applied in emission reduction calculations. However, the figure 2,126.47 continues to apply as the accurate fuelwood consumption number for new stoves in the project scenario (aging is applied only for Year 2 and forward); thus, the figure is fixed and does not change from year to year. The Gold Standard confirms that we do not need to repeat assessments more than once for each age group of stoves, and that our approach of reassessing performance on successively aging stoves each year (without repeating KPTs the newer stoves) is correct. In fact the methodology provides that the KPT be performed every 2 years, so we have done it more often than required. Please refer to Page 24 of the Kitchen Meth v.01, under section B, paragraph 4: "An 'Aging-Stove KT' should be undertaken not less frequently than bi-annually (every two years) <i>for sales made in the first year</i> [my italics], to measure fuel reduction performance..." The value of 2,126.47 flows to the ER calculations as follows: 1. Absolute fuelwood consumption on a dry-wood basis returns the value of 5.83 kg/day = 2,126.47/year (see 2010 Fuelwood Consumption Study, "SUMMARY" worksheet, Cell K58). 2. This figure is adjusted according to adult equivalent person-meal and returns the value of 0.66 kg/day dry fuelwood per person meal (Cell Q58). 3. The following inputs flow from the 2010 Fuelwood Consumption Study to the "Inputs" worksheet in the file "Annex_18_ER Calculations 2014.xls": • Adult equivalent per HH: 3.76 person (Cell N58 in 2010 study; Cell D17 in ER Calcs) • Fuel per person meal: 0.66 kg (Cell Q58 in 2010 study; Cell D18 in ER Calcs) • Meals per day: 2.77 (Cell M58 in 2010 study; Cell D19 in ER Calcs) 4. In the file "Annex_18_ER Calculations 2014.xls," these inputs are processed with relevant emission factors to determine project emissions ($PE_{household}$). The figure returned is 3.58 tonnes/year (see Cell C21, "ER-Estufa 2x3" worksheet). 5. The corresponding baseline figures are also sourced from the 2010 Fuelwood Consumption Study and input in Cells D9-D11 of the "Input" worksheet of the ER Calcs. Baseline emissions are calculated as 6.89 tonnes/year (Cell C9, "ER-Estufa 2x3" worksheet). 6. Project emissions are compared against baseline emissions to determine a figure for emission reductions per stove ($ER_{household}$) of 3.31 tonnes/year. 7. In the file "Annex_01_Financing Plan 2014.xlsx" the figure 3.31 is applied only in the first year. Emission reduction figures for subsequent years are adjusted for aging (see "Assumptions" worksheet, Cells G15-G22).		
Assessment team opinion	Date	22/12/2014

It is confirmed that baseline and project scenario are both calculated by the same method (as is the case for 2010 baseline fuel wood consumption study vs. every aging cook stove test done thereafter), hence per-person meal approach is accepted.

Gold Standard Secretariat also confirmed through their e-mail dated 16/12/2014, PM does not need to repeat assessments more than once for each age group of stoves, and PM's approach of reassessing performance on successively aging stoves each year (without revisiting the newer ones) is correct.

The methodology provides that the KPT be done biennially (every 2 years), so PM has complied.

Refer to Page 24 of the Kitchen Meth v.01, under section B, paragraph 4: "An 'Aging-Stove KT' should be undertaken not less frequently than bi-annually (every two years) for sales made in the first year, to measure fuel reduction performance..."

CAR2 is closed.

Type	Date	Reference
CL3	04/12/2014	Monitoring report version 2
Description of the non-conformance		
Leakage: As per the surveys conducted (6221, January 1, 2014 to 28 th April 2014), 18 cases were reported not replacing a traditional stove. Although the main reason for this is that these stoves were installed in newly constructed houses and it contributes to 0.29% of the surveyed sample, the value if extrapolated to the entire population results in a figure of 548 tCO ₂ e. Please clarify how was this considered de-minimus.		
Response from PP	Date	12/18/14
Although materiality thresholds for leakage are not specifically addressed in the applicable Kitchen Methodology v.01, an e-mail from Ivan Hernandez dated December 4, 2014, states as follows: "If leakage is less than 1%, I would say it is non material, then negligible." Additionally, leakage is commonly reported in increments of 1%. 0.29% is well below a 1% threshold, and when rounded down to the nearest whole percent, would be stated as 0%.		
Assessment team opinion	Date	22/12/2014
CL3 is closed following the client's justification above.		

7. CV OF VERIFICATION TEAM

Competence Statement			
Name	Siddharth Yadav		
Country	England (UK)		
Education	Masters (Oxford University) B. Tech. - Civil Engineering		
Experience	14 Years		
Field	Energy, Climate Change & Environment Complete more than 30 CDM projects and various GS projects		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (1.2)	YES		
TA Expert (13.1)	YES		
Reviewed by	Abhishek Mahawar	Date	10/11/2014
Approved by	Kaviraj Singh	Date	11/11/2014

Competence Statement			
Name	Ashok Gautam		
Country	India		
Education	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management), IIT Delhi		
Experience	14 Years		
Field	Energy, Air Pollution, Climate Change & Environment Complete more than 200 CDM projects and various GS projects		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.1)	YES		
TA Expert (3.1)	YES		
TA Expert (13.1)	YES		
Reviewed by	Abhishek Mahawar	Date	06/04/2014
Approved by	Kaviraj Singh	Date	06/04/2014

Competence Statement			
Name	Ashu Sharma		
Country	India		
Education	Masters (Energy Management), DAVV Indore Masters (Physics), CCS Univeristy Meerut		
Experience	12+ Years in energy audit and insulations		
Field	Energy & Insulation		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (3.1)	YES		
Reviewed by	Abhishek Mahawar	Date	06/04/2014
Approved by	Ashok K Gautam	Date	06/04/2014

Competence Statement			
Name	Dr. Kaviraj Singh		
Country	India		
Education	Masters (Environmental Sciences) Masters (Energy & Environment), DAVV, Indore Doctorate (Environmental Engg.), IIT Delhi		
Experience	8+ Years in CDM at different roles. Completed more than 100 CDM projects & various GS projects as auditor		
Field	Climate Change, Environment, Energy, Waste Management		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert (1.2)	YES		
TA expert (13.1)	YES		
Reviewed by	Abhishek Mahawar	Date	06/04/2014
Approved by	Ashok K Gautam	Date	06/04/2014

History of the document (template)						
Version	Date	Nature of Revision	Prepared by		Reviewed by	
			Name	Date	Name	Date
1.0	24/11/2014	Initial adoption	Abhishek Mahawar	23/11/2014	Ashok K Gautam	23/11/2014