



VERIFICATION REPORT

- 2ND PERIODIC VERIFICATION-

< E+ CARBON >

< IMPROVED HOUSEHOLD CHARCOAL STOVES IN MALI >

GS REF. No. : < 414 >

Monitoring Period: 2009-09-09 to 2010-08-31
(incl. both days)

Report No: 8000374192 – 10/466

Date: 2011-07-05

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Verification Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
	8000374192– 10/466	0	2011-07-05	
Project:	Title:	Registration date:		GS-No.:
	<i>Improved Household Charcoal Stoves in Mali</i>	2009-09-09		414
Project Participant(s):	Host party:		Other involved parties:	
	Mali			
Applied methodology/ies:	Title:	No.:	Scope:	
	<i>Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes, Version 1</i>		1, 3	
Monitoring:	Monitoring period (MP):		No. of days:	MP No.
	2009-09-09 to 2010-08-31 - both days included		357	2
Monitoring report:	Title:	Draft version:		Final version:
	<i>Improved Household Charcoal Stoves in Mali</i>	01		06
Verification team / Technical Review and Final Approval	Verification Team:		Technical review:	Final approval:
	Rainer Winter (TL) Grzegorz Kochaniewicz (TM) Emilio Martin (TM) Davinah Uwella Milenge (OT)		Katja Beyer Lars Kirchner David Lubanga (OR)	Eric Krupp
Emission reductions: [t CO_{2e}]	Verified amount		As per draft MR:	As per PDD:
	70068 t		58508 t	69165 t /a
Summary of Verification Opinion:	<p>E+ Carbon has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 2nd periodic verification of the project: “Improved Household Charcoal Stoves in Mali”, with regard to the relevant requirements for GS project activities. The project reduces GHG emissions due to fuel-efficient charcoal stoves. The project is based on pilot work by Katene Kadji, Mali. It is owned and managed by trained entrepreneurs. This verification covers the period from 2009-09-09 to 2010-08-31 (including both days).</p> <p>In the course of the verification 10 Corrective Action Requests (CAR) and 5 Clarification Requests (CL) were raised and successfully closed. Furthermore 3 FARs are raised to improve the monitoring system in the future. The verification is based on the following documents made available to the TÜV NORD JI/CDM CP by the project participant: the draft monitoring report, the revised monitoring report, the monitoring plan as set out in the registered GS-VER-PDD, the validation report, emission reduction calculation spreadsheet and supporting documents.</p> <p>As a result of this verification, the verifier confirms that:</p> <ul style="list-style-type: none"> • all operations of the project are implemented and installed as planned and described in the validated project design document. • the monitoring plan is in accordance with the applied approved GS methodology ,i.e., Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes, Version 1 • the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately. • the monitoring system is in place and functional. The project has generated GHG emission reductions. <p>As the result of the Retroactive periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that</p>			

2nd Periodic Verification Report: “Improved Household Charcoal Stoves in Mali”

TÜV NORD JI/CDM Certification Program

P-No: 8000374192– 10/466



	the project has achieved emission reductions in the above mentioned reporting period as follows:	
	2009-09-09 to 2009-12-31	19,327 tCO _{2e}
	2010-01-01 to 2010-08-31	50,741 tCO _{2e}
	Total	70,068 tCO _{2e}
Document information:	<i>Filename:</i>	<i>No. of pages:</i>
	S01-VA050-A1	109

Abbreviations:

CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO₂	Carbon dioxide
CO_{2eq}	Carbon dioxide equivalent
CL	Clarification Request
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GS	Gold Standard
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PP	Project Participant
QA/QC	Quality Assurance / Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
XLS	Emission Reduction Calculation Spread Sheet

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1. INTRODUCTION

E+ Carbon has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the 2nd periodic verification of the project

“Improved Household Charcoal Stoves in Mali”

with regard to the relevant requirements for Gold Standard project activities. The verifiers have reviewed the implementation of the monitoring plan (MP) in the registered GS project number GS 414.

GHG data for the monitoring period covering 2009-09-09 to 2010-08-31 was verified in detailed manner applying the set of requirements, audit practices and principles as required under the Validation and Verification Manual ^{/VVM/} of the UNFCCC as well as the Gold Standard Validation and Verification Manual for Voluntary Offset Projects ^{/GS-VVM/}.

This report summarizes the findings and conclusions of this 2nd periodic verification of the above mentioned GS registered project activity.

1.1. Objective

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the PDD,
- compliance with applied approved methodology and the provisions of the monitoring plan,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- accuracy of the monitoring equipment,
- quality of evidence,
- significance of reporting risks and risks of material misstatements.

1.2. Scope

The verification of this registered project is based on the validated project design document ^{/PDD/}, the monitoring report ^{/MR/}, emission reduction calculation spread sheet ^{/XL-summary/}, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- Article 12 of the Kyoto Protocol ^{/KP/},
- guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1 ^{/MA/}, and subsequent decisions made by the Executive Board and COP/MOP,
- other relevant rules, including the host country legislation,
- CDM Validation and Verification Manual ^{/VVM/},
- Gold Standard Validation and Verification Manual for Voluntary Offset Projects ^{/GS-VVM/}
- monitoring plan as given in the registered GS-VER-PDD ^{/PDD/},
- Approved Gold standard methodology i.e. Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes”, (version 1) ^{/METH/}.

2. GHG PROJECT DESCRIPTION

2.1. Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data
Project title	Improved Household Charcoal Stoves in Mali
Project size	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale
Project Scope (according to UNFCCC sectoral scope numbers for CDM)	<input checked="" type="checkbox"/> 1 Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/> 2 Energy distribution
	<input checked="" type="checkbox"/> 3 Energy demand
	<input type="checkbox"/> 4 Manufacturing industries
	<input type="checkbox"/> 5 Chemical industry
	<input type="checkbox"/> 6 Construction
	<input type="checkbox"/> 7 Transport
	<input type="checkbox"/> 8 Mining/Mineral production
	<input type="checkbox"/> 9 Metal production
	<input type="checkbox"/> 10 Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/> 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/> 12 Solvents use
	<input type="checkbox"/> 13 Waste handling and disposal
	<input type="checkbox"/> 14 Afforestation and Reforestation
	<input type="checkbox"/> 15 Agriculture
Applied Methodology	<i>Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes”, (version 1)</i>
Technical Area(s)	E: EE Households
GS registration No.	GS 414
Crediting period	<input type="checkbox"/> Renewable Crediting Period (7 y) <input checked="" type="checkbox"/> Fixed Crediting Period (10 y)

2.2. Project Verification History

Essential events since the registration of the project are presented in the following Table 2-2.

Table 2-2: Project verification history

#	Item	Time	Status
1	Date of registration	2009-09-09	<i>registered</i>
2	Start of crediting period	2007-11-27	As per GS website
3	Retroactive Monitoring period	2007-11-27 to 2009-09-08	Issued
4	2 nd Monitoring period	2009-09-09 to 2010-08-31	Ongoing

2.3. Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-3).

Table 2-3: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	Mali	Mr. Ousmane Katene Kadji, Mali
Other involved party/ies	USA	E + carbon

2.4. Project Location

The details of the project location are given in table 2-4:

Table 2-4: Project Location

No.	Project Location
Host Country	Mali
Region:	Bamako
Project location address:	Katene Kadji – Sogoniko Commercial (Cite UNICEF) B.P.E 2846.

2.5. Technical Project Description

The key parameters for the project are given in table 2-5:

Table 2-5: Technical data of the plant

Parameter	Unit	Value
Manufacturer		Katene Kadji
Stove types – 5 Types		Super Grand Grand Format Moyen Format Petit Format Tea Format
Stove material		Steel and Ceramic Liner
Fuel		Charcoal
Efficiency increase	%	33

This GS registered project reduces greenhouse emissions by disseminating fuel-efficient charcoal stoves. The project is based on pilot work by Katene Kadji, Mali.

Five types of stoves are sold under the auspices of the project:

- a. improved fuel-efficient household charcoal stoves (tea)
- b. improved fuel-efficient household charcoal stoves (small)
- c. improved fuel-efficient household charcoal stoves (medium)
- d. improved fuel-efficient household charcoal stoves (grand)
- e. improved fuel-efficient household charcoal stoves (super grand)

The improved charcoal stove reduces fuel consumption by using a ceramic liner that increases combustion efficiency and retains heat. The SEWA stove consists of hourglass shaped metal cladding with perforated interior ceramic liner that allows ash to fall to the collection chamber at the base. A thin layer of cement is placed between the cladding and the liner to bind the two. During use, a single pot rests at the top of the stove.

While these stoves significantly reduce greenhouse gas emissions, they simultaneously provide co-benefits to users and families in the form of relief from high fuel costs, reduced exposure to health-damaging airborne pollutants, faster cooking (resulting in time-savings), and increased cleanliness and convenience. Finally, they curb deforestation by decreasing demand for charcoal.

3. METHODOLOGY AND VERIFICATION SEQUENCE

3.1. Verification Steps

The verification consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the monitoring report
- A desk review of the Monitoring Report^{MR/} submitted by the client and additional supporting documents with the use of customised verification protocol^{CPM/} according to the Validation and Verification Manual^{VVM/},
- Verification planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

The sequence of the verification is given in the table 3.1 below:

Table 3.1: Verification sequence

Topic	Time
Assignment of verification	2010-08-13
On-site visit	2010-10-24 to 2010-10-26
Draft reporting finalised	2010-11-11
Final reporting finalised	2011-07-05
Technical review finalised	2011-07-05

3.2. Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3. Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consistent of one team leader and 2 additional team members, was appointed. Furthermore also the personnel for observation, the technical review and the final approval was determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-1 below.

Table 3-1: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence	Team Leading competence
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Rainer Winter	TN CERT Germany	TL	SA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Kochaniewicz, Grzegorz	TN South Africa	TM	A	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Milenge Uwella, Davinah	TN South Africa	TM	ETE	<input type="checkbox"/>	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Emilio Martin	TN CERT Germany	TM	LA	<input checked="" type="checkbox"/>	E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr.	Katja Beyer	TN CERT	TR ³⁾	LA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence	Team Leading competence
<input checked="" type="checkbox"/> Ms.									
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	David Lubanga	TN CERT	OR ³⁾	T	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Lars Kirchner	TN CERT	TR ³⁾	A	<input checked="" type="checkbox"/>	E	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Eric Krupp	TN CERT	FA	LA	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 1) TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval
 2) GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert
 3) GHG auditor status (at least Assessor)
 4) As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)
 5) In case of verification projects
 A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE
 B) No team member

3.4. Publication of the Monitoring Report

The draft monitoring report, as received from the project participants, has been made publicly available on the dedicated GS website prior to the verification activity commenced. Comments received are taken into account in the course of the verification, if applicable.

3.5. Verification Planning

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion.

Various tools have been established in order to ensure an effective verification planning.

Risk analysis and detailed audit testing planning



For the identification of potential reporting risks and the necessary detailed audit testing procedures for residual risk areas table A-1 is used. The structure and content of this table is given in table 3-2 below.

Table 3-2: Table A-1; Identification of verification risk areas

Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing				
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
<i>The following potential risks were identified and divided and structured according to the possible areas of occurrence.</i>	<i>The potential risks of raw data generation have been identified in the course of the monitoring system implementation. The following measures were taken in order to minimize the corresponding risks. The following measures are implemented:</i>	<i>Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of every verification.</i>	<i>The additional verification testing performed is described. Testing may include:</i> <ul style="list-style-type: none"> - Sample cross checking of manual transfers of data - Recalculation - Spreadsheet ‘walk throughs’ to check links and equations - Inspection of calibration and maintenance records for key equipment - Check sampling analysis results <i>Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</i>	<i>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.</i>

The completed table A-1 is enclosed in the annex 1 (table A-1) to this report.

Project specific periodic verification checklist

In order to ensure transparency and consideration of all relevant assessment criteria, a project specific verification protocol has been developed. The protocol shows, in a transparent manner, criteria and requirements, means and results of the verification. The verification protocol serves the following purposes:



- It organises, details and clarifies the requirements a CDM project is expected to meet for verification
- It ensures a transparent verification process where the verifying DOE documents how a particular requirement has been proved and the result of the verification.

The basic structure of this project specific verification protocol for the periodic verification is described in table 3-3.

Table 3-3: Structure of the project specific periodic verification checklist

Table A-2: Periodic verification checklist				
Checklist Item	Reference	Verification Team Comments	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-2 are linked to the various requirements the monitoring of the project should meet. The checklist is organised in various sections as per the requirements of the topic and the individual project activity. It further includes guidance for the verification team.</i>	<i>Gives reference to the information source on which the assessment is based on.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the verification team and how the assessment was carried out. The reporting requirements of the VVM shall be covered in this section.</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft verification stage.</i>	<i>In case of a corrective action or a clarification the final assessment at the final verification stage is given.</i>

The periodic verification checklist (verification protocol) is the backbone of the complete verification starting from the desk review until final assessment. Detailed assessments and findings are discussed within this checklist and not necessarily repeated in the main text of this report.

The completed verification protocol is enclosed in the annex (table A-2) to this report.

3.6. Desk review

During the desk review all documents initially provided by the client and publicly available documents relevant for the verification were reviewed. The main documents are listed below:

- the last revision of the PDD including the monitoring plan^{/PDD/},
- the last revision of the validation report^{/VAL/},
- the monitoring report, including the claimed emission reductions for the project^{/MR/},
- the emission reduction calculation spreadsheet^{/XL-6/, /XL-summary/}.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

3.7. On-site assessment

As most essential part of the verification exercise it is indispensable to carry out an inspection on site in order to verify that the project is implemented in accordance with the applicable criteria. Furthermore the on-site assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The main tasks covered during the site visit include, but are not limited to:

- The on-site assessment included an investigation of whether all relevant equipment is installed and works as anticipated.
- The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.
- Information processes for generating, aggregating and reporting the selected monitored parameters were reviewed.
- The duly calibration of all metering equipment was checked.
- The monitoring processes, routines and documentations were audited to check their proper application.
- The monitoring data were checked completely.
- The data aggregation trails were checked via spot sample down to the level of the meter recordings.

1 member and 1 observer of the verification team attended the site visit.

Before and during the on-site visit the verification team performed interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

Representatives of Katene Kadji and E+Carbon including the operational staff of the plant were interviewed. The main topics of the interviews are summarised in Table 3-4.

Table 3-4: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
1. Projects & Operations Personnel, Katene Kadji 2. Consultant, E+Carbon	<ul style="list-style-type: none"> - General aspects of the project - Technical equipment and operation - Changes since validation - Monitoring and measurement equipment - Remaining issues from validation - Calibration procedures - Quality management system - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring data management - Data uncertainty and residual risks - GHG emission reduction calculation

Interviewed Persons / Entities	Interview topics
	<ul style="list-style-type: none">- Procedural aspects of the verification- Maintenance- Environmental aspect

3.8. Draft verification reporting

On the basis of the desk review, the on-site visit, follow-up interviews and further background investigation the verification protocol is completed. This protocol together with a general project and procedural description of the verification and a detailed list of the verification findings form the draft verification report. This report is sent to the client for resolution of raised CARs, CLs and FARs.

3.9. Resolution of CARs, CLs and FARs

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

Corrective Action Requests (CARs) are issued, if:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications requiring actions by the project participants to be verified during verification have not been resolved.

The verification team uses the term Clarification Request (CL), which is issued if:

- information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the monitoring and reporting require attention and / or adjustment for the next verification period.

For a detailed list of all CARs, CLs and FARs raised in the course of the verification pl. refer to chapter 4.

3.10. Final reporting

Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion can be issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued.

The final report summarizes the final assessments w.r.t. all applicable criteria.

3.11. Technical review

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.12. Final approval

After successful technical review an overall (esp. procedural) assessment of the complete verification will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the request for issuance can be started.

4. VERIFICATION FINDINGS

In the following paragraphs the findings from the desk review of the monitoring report^{/MR/}, the calculation spreadsheet^{/XLS/}, PDD^{/PDD/}, the Validation Report^{/VAL/} and other supporting documents, as well as from the on-site assessment and the interviews are summarised.

The summary of CAR, CL and FAR issued are shown in Table 4-1:

Table 4-1: Summary of CAR, CL and FAR

Verification topic	No. of CAR	No. of CL	No. of FAR
H - Project history	4	0	0
U - Update on Changes and Incidents	0	0	0
R - Monitoring Report – General	2	0	0
P - Monitoring Parameters	2	4	1
C - Emission Reduction Calculation	0	1	0
Q - Quality Management	2	0	2
SUM	10	5	3

The following tables include all raised CARs, CLs and FARs and the assessments of the same by the verification team. For an in depth evaluation of all verification items it should be referred to the verification protocols (see Annex).

Finding:	H1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Explain how the FAR related to data manipulation (Finding Q2) from the last verification report was addressed.		



Finding:	H1
<p>Corrective Action #1</p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>PP and local partner have made great strides in improving data manipulation. On the production side, the following information is recorded daily by the local partner</p> <ul style="list-style-type: none"> -number of liners moulded -number of liners put to dry -number of liners going in the kiln -number of liners coming out of the kiln -number of damaged liners -number of liners sold to metal artisans <p>These data have been recorded in a book in the past but going forward, they will be kept in an electronic database.</p> <p>On the sales side, the local partner and his network of metal artisans keep records of every sale made which is entered in an electronic database and sent to PP quarterly. Because sales data are an important variable in the calculation of ER their manipulation is tightly controlled. The local partner checks the number of stoves reported as sold by an artisan against the number of liners sold to that artisan. In cases where inconsistencies are found the lower number is reported.</p> <p>PP and local partner recognize however that the current system of comparing number of liners sold against number of stove sold can be improved and are putting in place a new system to minimize inconsistencies.</p>
<p>DOE Assessment #1</p> <p><i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>During the onsite visit, the verification team saw the local partners recording system which included: daily write up on production on a chalk board; which generated the data of final liners that were to be used in the stove production. These would be recorded in the sales register once sold to the metal artisans. The metal artisans kept rudimentary records of the liners they purchased and the complete stoves sold. Nevertheless the number of liners delivered to the resellers/metal artisans was confirmed by the resellers themselves during the onsite visit. The verification team considers the action taken by the PP as appropriate. However the recording system needs to be further improved in particular to include a precise record of sold stoves. Hence a new FAR P3 was opened.</p> <p>Further the statement in the response to the CL from the PP: “PP and local partner have made great strides in improving data manipulation”, needs to be clarified.</p>
<p>Corrective Action #2</p>	<p>PP makes note for FAR P3 and has already started improving upon the recording system of stoves sold.</p> <p>By “PP and local partner have made great strides in improving data manipulation” PP refers to efforts made on the sales tracking system since the beginning of the project. PP recognizes that the system can be improved but what is currently in place is an improvement from what was in place at the start of the project.</p>



Finding:	H1
DOE Assessment #2	The PP provides explanation about the process of improvement of monitoring and recording system. Also the interpretation of the used formulation was provided. Hence the CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Finding:	H2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Explain how the FAR related Non-Renewable Biomass Assessment (Finding FAR P1) from the last verification report was addressed.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The fraction of Non-Renewable biomass was re-assessed in 2010 using actualised government data. The assessment and the source of data have been provided to DOE.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The Non-Renewable biomass (NRB) fraction was assessed based on the host country's November 2010 study that made a re-adjustment to the 2006 Study on Bamako fuelwood supply. The GS methodology monitoring requirement for this parameter is for it to be re-assessed bi-annually by a third party. The third party, Berkeley Air Monitoring Group, undertook the 2010 Bi-annual Monitoring study in August 2010, which recommended the NRB of 51% for charcoal and 54% for fuelwood. The PP updated this fraction to 67% for charcoal and 67% for fuelwood based on the Government study. The evidences were assessed and collaborated with onsite interviews of the relevant government officials. Hence the CAR was closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Finding:	H3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR



Finding:	H3
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Explain how the FAR related Leakage Assessment (Finding FAR P2) from the last verification report was addressed.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Leakage effects were assessed in 2010 by Berkeley Air Monitoring Group and found to be insignificant. Results are in the Berkeley Air “Bi-Annual Monitoring of the Sewa Charcoal Stove, Katene Kadji, Mali” which was provided to the DOE.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The registered Monitoring Plan states that this parameter is monitored bi-annually by a third party. Berkeley Air Monitoring Group undertook the Leakage assessment in August 2010 and concluded that leakage was insignificant. This was further crosschecked during onsite visit through randomised house-to-house interviews with end users. The CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Finding:	H4		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Explain how the FAR related New Stoves Assessment (Finding FAR P4) from the last verification report was addressed.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The existence of New Stoves was assessed in the 2010 Berkeley Air Bi-Annual Monitoring Report. There are no new stove models in the project.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Both the Monitoring Plan and the applied GS methodology request this parameter to be assessed by bi-annually by a third party. Berkeley Air Monitoring Group in its 2010 Bi-annual monitoring report indicates that there were no new stove models introduced by the project. This was also proved during onsite visit hence the CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Finding:	R1
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Finding:	R1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Following errors have been identified in the Monitoring Report: <ul style="list-style-type: none"> the MR lacks a version number; the MR has no date; the information regarding the first and the last day of the monitoring period has to be given; page 24 “usage for all stoves aged 1-2years...is accounted in the Age 0-1 worksheet”, this has to be explained. 		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ul style="list-style-type: none"> A version number has been added to the MR (see cover page) A date has been added to the MR (see cover page) Information on first and last date has been added to the MR (see cover page) The correct usage rate for all ages is what is contained in the worksheets. Page 12 and page 24 of the MR have been corrected. 		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ul style="list-style-type: none"> The corrections of version number date and information of length of monitoring period was corrected accordingly. The “Usage for all stoves aged 0 - 1 year, which are in their 1st year of use, is accounted in the ‘Age 0-1’ worksheet, usage for all stoves aged 1 – 2 years, which are in their 2nd year of use, is accounted in the ‘Age 0-1’ worksheet, etc.”is still not corrected. 		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	MS Word changed the formatting of this field by putting in an automatic numbering. Changes have been made again.		
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The information in the Monitoring Report is still not correct. Permanent correction has to be made by project participants. Correct Document has to be provided for verification.		
Corrective Action #3 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Correction has been made on the first paragraph of page 25 of the MR to read “Usage for all stoves aged 0 - 1 year, which are in their 1st year of use, is accounted in the ‘Age 0-1’ worksheet, usage for all stoves aged 1 – 2 years, which are in their 2nd year of use, is accounted in the ‘Age 1-2’ worksheet, etc. “		
DOE Assessment #3 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The requested correction has been made. The CAR is closed.		



Finding:	R1
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input checked="" type="checkbox"/> Appropriate action was taken</p> <p><input checked="" type="checkbox"/> Project documentation was corrected correspondingly</p> <p><input type="checkbox"/> Additional action should be taken</p> <p><input checked="" type="checkbox"/> The project complies with the requirements</p>

Finding:	R2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	The difference between the ex-ante ER and the monitored ER has to be reported in the Monitoring Report.		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	This information has been added to the Monitoring Report in section D.4.3		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>From the information given in section D.4.3, the comparison of the ex-ante and ex-post emission reductions is not correct, i.e. the ex-post emission reductions for 2010 cannot be compared to the emission reductions 2010 ex-ante because the monitoring period for the ex-post ended on 31 August 2010 before end of the year.</p> <p>Further, the ex-post emission reductions highly exceed ex-ante estimated emission reductions. Clarification of this matter is required.</p>		
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Table D.4.3 in the Monitoring Report has been changed to compare the ex-ante emissions reductions with the ex-post emissions reduction for the period of January 1 through August 31, 2010.</p> <p>Ex-post emission reductions highly exceed ex-ante estimated emission reductions because ex-ante ER calculations were based on the average size stoves while Katene sells five stove sizes, two of which are larger than the average size and constitute 75% of overall sales. These large stoves realize more emissions reductions. Moreover ex ante ER calculations for 2010 were based on a 51% NRB fraction for charcoal and 54% NRB fraction for firewood while the ex-post ER are based on a 67% NRB fraction for both. Furthermore, in the ex-ante estimates, the PP made the conservative assumption of a 20% annual drop off rate in stove usage while the drop off rate turned out to be much less.</p>		
<p>DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	The verification of changes is not possible without updated ER calculation. Please provide updated ER calculation excel sheet.		



Finding:	R2
<p>Corrective Action #3 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	PP has provided updated ER calculation excel sheet via a web link.
<p>DOE Assessment #3 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	The PP provided updated ER calculation excel sheet. The changes have been implemented as described above. The CAR is closed.
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Finding:	P1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	Social employment quality is a monitored parameter. Therefore the record of changes in the employment has to be presented to DOE. Further, the number of 20 employees stated in the MR has to be substantiated with evidence and if necessary corrected.		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	The changes in employment quality are: -adoption of formal employment contracts. -subscription of employees who have been with the company for at least 5 year to a health and retirement plan -provision of personal protection equipment PP is providing records of these changes as enclosures to the Monitoring Report. Katene has created 4 new jobs since the last verification. However 2 former employees left the enterprise during the course of the year decreasing the number of employees from 20 to 18. Since the current number of employees is 18, the PP has revised the MR to reflect that number.		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	The monitoring report was corrected accordingly. The explanation of the current number of employees was provided and corresponds to the number of employees assessed during onsite visit. The CAR is closed.		



Finding:	P1
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input checked="" type="checkbox"/> Appropriate action was taken</p> <p><input checked="" type="checkbox"/> Project documentation was corrected correspondingly</p> <p><input type="checkbox"/> Additional action should be taken</p> <p><input checked="" type="checkbox"/> The project complies with the requirements</p>

Finding:	P2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>The Monitoring and Evaluation reports for employment quality are supposed to be provided twice annually. They have to be provided to DOE.</p>		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Monitoring and Evaluation reports are part of E+Co’s investment follow-up process. E+Co monitoring and evaluation officers write reports on E+Co investee enterprises twice annually for the duration of their loan. Katene Kadji has recently fully repaid its debt to E+Co and is therefore no longer subject to this reporting requirement. Employment quality will continue to be assessed qualitatively by project proponent and reported on in the MR.</p>		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The exact qualitative measure for quality of employment has to be clearly described in the monitoring report and evidences have to be provided to the DOE.</p>		
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Quality of employment is assessed through the level of salary that Katene pays its employees compared to what is prescribed by law; the benefits that it offers including pension plan and health plan; and any measures that are put in place to improve the working conditions including safety in the work place. In Mali, the minimum salary is 28,460 CFA¹ while the starting salary at Katene is 30,000 CFA. Employees who have been with Katene for at least 5 years benefit from a pension plan paid for by Katene as well as a health insurance that covers them and their family. This is not a requirement of Malian labor law². Finally, Katene provided personal protection equipment to its contractors (metal artisans) at no cost which is not required by law either.</p> <p>Table B.2.7 of the Monitoring Report has been changed to show that Employment Quality will be assessed qualitatively through salaries, benefits and work conditions.</p>		

¹ Phone interview with Le Conseil National du Patronat au Mali, a labor union

² Loi 92-020/ Portant Code du Travail en République du Mali



Finding:	P2
<p>DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The qualitative measure of using employment contracts that state employee salary as a basis for assessing employment quality is in line with the monitoring requirements in the applied GS methodology and the MP for the concerned parameter. However, During the onsite visit 18 employed staff was evidenced. Please see CAR P2 above and compare with MR B.2.7. Further clarification is requested.</p>
<p>Corrective Action #3 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Current number of employees in MR B.2.7. has been changed to 18.</p>
<p>DOE Assessment #3 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The number of employees was corrected in the monitoring report and matches the number confirmed during the onsite visit.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements </p>

Finding:	P3		
Classification	<input type="checkbox"/> CAR	<input type="checkbox"/> CL	<input checked="" type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>The ER calculation is based on the sales data provided by Katene Kadji and resellers. However data on ceramic liner delivery from Katene Kadji and sales of stoves is not clearly traceable. The monitoring system from manufacture of ceramics with all ceramic losses, delivery to the reseller/blacksmith and sales to the end user has to be further improved. This has to be checked during the next periodic verification.</p>		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>PP makes note of this FAR.</p>		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>			



Finding:	P3
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<input checked="" type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements

Finding:	P4		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	Data sources used for the calculation of the non-renewable biomass has to be clarified and updated if applicable.		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	The calculation of non-renewable biomass has been updated and is provided as enclosure to the MR. Additionally, variables for NRB in sections B.2.2 and B.2.4 of the MR as well as the Emissions Reductions Summary in section D.4.2 have been revised.		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The calculation of non-renewable biomass was updated using actualised Government sources. The calculation is based on data estimated for 2010. The allowed harvest volume of 1 129 994 steres of fuel wood for 2010 was used in the calculation. However the used sources provide the value of 1 614 277 steres of fuel wood as the total production in the supply area. According to the methodology, the production of the renewable biomass is the MAI, therefore correction is requested.</p> <p>Furthermore, the data used in the NRB calculation is the estimation of allowed harvest volume and demand for 2010 while the monitoring period started in September 2009. Clarification on the calculation of the non-renewable biomass only for the 2010 is requested.</p>		
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Calculation of NRB fraction has been changed in the 2010 NRB Study. The mean annual increment of 1 614 277 steres is used instead of the allowable harvest.</p> <p>Harvest volume and demand for 2010 is used because out of the 12 months being monitored, 8 fall in 2010. Therefore 2010 data is more representative of the current monitoring period. Moreover, this NRB value will be valid for two years as per the methodology, thus it is appropriate to use the most updated data available to ensure that the NRB is applicable to the next verification period, when the methodology does not require that we update it.</p>		



Finding:	P4
<p>DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The fraction of non-renewable biomass was calculated correctly in line with the methodology. Also the explanation for use of the value of fraction of non-renewable biomass from 2010 study for the second monitoring period was assessed as correct. Therefore the Clarification was closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements</p>

Finding:	P5		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>Clarify why some of the variables listed in the monitoring report were not surveyed at the frequency stated in the Monitoring Plan.</p>		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>All the variables were re-assessed in 2010. However for variables whose values from the 2008 Baseline Study were maintained, the PP kept the source of data as “2008 Baseline Study” which gives the impression that the variables were not surveyed. PP has changed the source of data to “2010 Bi-annual study” and provided an explanation when the value of the variable is from 2008. Change are made in sections B.2.2, B.2.3, B.2.4 and D.1 (list of monitored parameters)</p>		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The variables from the 3rd party report were updated accordingly as per conducted biannual surveys. The changes were implemented in the monitoring report. The clarification is closed.</p>		
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements</p>		

Finding:	P6		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>Clarify and provide explanation for the overlapping of KPT quarterly survey.</p>		



Finding:	P6
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Kitchen Surveys (KS) conducted for Q2 and Q3 of 2009 have overlapping dates. This is explained by the fact that more than the necessary number of households was surveyed in Q2. The extra survey results were used in Q3 and complemented with new surveys.</p>
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The quarterly kitchen surveys are overlapping and not corresponding to the Quarters as defined by the methodology. Additional explanation on this issue is requested.</p>
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Though it is unfortunate that overlapping data in this case was unavoidable due to logistical field constraints, there are several things to consider that could provide comfort in this particular circumstance. The reason the Gold Standard methodology is written to include quarterly surveys is to take into account seasonal variations in fuel use, such as changes between the wet and dry seasons, etc. In fact, version 3 of this methodology will be released by Gold Standard within a month or so (we are co-authors), in which quarterly surveys are not required, as long as the PP can argue convincingly that seasonal variations are taken into account. In the case of these overlapping surveys, the change would have no material impact on the results because since 2008, we have observed no change in KS results between wet and dry seasons. Nonetheless, the PP accepts that this should not occur in the future and will pay special attention to not overlapping KS periods going forward.</p>
<p>DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The explanation was provided. The overlapping of surveys was due to the logistical circumstances. This overlapping doesn't have material influence on the conservativeness of the calculation. Therefore the clarification is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements </p>

Finding:	P7		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR



Finding:	P7
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>After a deeper scrutiny of the sales record excel sheet, some discrepancies were found with information contained in the sales record "Fiche de Ventes" provided during the onsite visit. In particular, the excel sheet has less "points de Vente ou Nom du Revendeur" than those recorded in the "Fiche de Ventes" hard copies.</p> <p>e.g.</p> <ul style="list-style-type: none"> • on 15 10 2009 delivery to only two Resellers F02-002 and K 06-001 were recorded in the excel sheet, while on the Fiche de Ventes 8 Resellers (F02-001; R05-001; R01-001; Ff06-001; Ff05-004; F05-003; F05-001;F02-002) were recorded. • On 26 10 2009 two Resellers F05-003 and K06-001 were recorded in the excel sheet , while on the Fiche de Ventes 6 Resellers (F02-001; F06-001; F05-004; F05-003; F05-001; F02-002) were recorded. <p>As per applied methodology "all bulk purchasers, ie retailers and institutional users" need to be recorded. Please clarify the discrepancy between the excel sheet and the provided evidences.</p>
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Some sales in the excel spreadsheet were attributed to the wrong sales points. PP has made corrections in the excel spreadsheet and has updated the MR.</p>
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The corrections have been made. The excel sheet now matches the original sales record. The CAR is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input checked="" type="checkbox"/> Appropriate action was taken</p> <p><input checked="" type="checkbox"/> Project documentation was corrected correspondingly</p> <p><input type="checkbox"/> Additional action should be taken</p> <p><input checked="" type="checkbox"/> The project complies with the requirements</p>

Finding:	C1		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>Clarify the summation inconsistencies in table D.4.2 of the MR, “Summary of the emissions reductions during the monitoring period”.</p>		



Finding:	C1
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>The summation inconsistencies are due to inconsistencies between rounded numbers that are displayed in Excel vs more exact decimal values that are entered in Excel, which when added, yield a slightly different sum. The PP has revised the Summary table to show decimals.</p>
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The summation inconsistencies were corrected and it displays decimals.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements</p>

Finding:	Q1		
Classification	<input type="checkbox"/> CAR	<input type="checkbox"/> CL	<input checked="" type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>During the onsite visit differences between the declared deliveries to reseller and sold stoves were found. The reseller maintained rudimentary records of delivery. Even though the questioned data was not used in the ER calculation, trouble shooting procedures in case of differences between the delivery from Katene to reseller/blacksmiths and sales record of stoves by reseller/blacksmiths has to be developed and provided to all parties. This has to be checked during the next periodic verification.</p>		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>PP and local partner have started developing these troubleshooting procedures. PP makes note of this FAR</p>		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>			
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input checked="" type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements</p>		



Finding:	Q2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The personnel training manual for the artisans/masons and surveyors should be provided.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Training manuals are provided as enclosures to the MR		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The training manuals for artisans/masons were provided. The trainings manual for the third party surveyors is still pending and has to be provided.		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	PP sent DOE a file called “Berkeley KPT training” on November 29, 2010. This is the document that Berkeley Air Monitoring Group uses to train surveyors on kitchen surveys and kitchen performance tests. PP is resending the file.		
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The “Berkeley KPT training” doesn’t provide information about training for artisan and masons. During the onsite visit a need for training for artisans and masons was evidenced. The personnel training manual for the artisans and masons should be provided.		
Corrective Action #3 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Training manual for artisans and masons has already been provided. See DOE Assessment #1 above.		
DOE Assessment #3 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The training manuals were provided. The CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Finding:	Q3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR



Finding:	Q3
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The Calibration Certificate for the measuring scale used in the KPT surveys has to be provided.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The Calibration Certificate is provided as an enclosure to the MR.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The calibration certificate from the manufacturer was provided.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

Finding:	Q4		
Classification	<input type="checkbox"/> CAR	<input type="checkbox"/> CL	<input checked="" type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The data from the monitoring has to be stored for at least two years beyond the monitoring period. During the onsite visit, it was found that no proper data storage and handling was in place. Data storage and handling has to be improved. This has to be checked during the next periodic verification.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	PP and local partner have started addressing this issue. PP makes note of this FAR.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>			
Conclusion <i>Tick the appropriate checkbox</i>	<input checked="" type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements		

5. SUMMARY OF VERIFICATION ASSESSMENTS

The following paragraphs include the summary of the final verification assessments after all CARs and CRs are closed out. For details of the assessments pl. refer to the discussion of the verification findings in chapter 4 and the verification protocol (Annex 1).

5.1. Implementation of the project

During the verification a site visit was carried out. On the basis of this site visit and the reviewed project documentation it can be confirmed that w.r.t. the realized technology, the project equipments, as well as the monitoring and metering equipment, the project has been implemented and operated as described in the registered PDD.

5.2. Project history

During the validation the validating DOE might have raised issues that could not be closed or resolved during the validation stage. For this purpose FARs might have been raised.

During the Retroactive Periodic Verification 4 FARs was raised. These were converted into CARs during this verification period. CAR H1 regarding the possible risk of data manipulation; the PP responded by providing evidences of data management that show continued improvement in data handling and storage. Sales records that were previously recorded in books will be stored electronically. CAR H2 regarding Non-renewable biomass (NRB) bi-annual study was closed after the PP provided evidence on the re-adjustment of NRB based on host country official data. CAR H3 regarding monitoring of leakage was closed based on the evidence presented from a third party report. CAR H4 regarding New Stove Model was closed based on third party report and onsite assessment confirmed no new stove models introduced by the PP. All FARs were successfully closed after the verification team ascertained that the Project meets the requirements stated in the FARs raised in the previous verification.

5.3. Special events

No special events with effect on the monitoring of the project have been observed during the monitoring period.

5.4. Compliance with the monitoring plan

The monitoring system and all applied procedures are completely in compliance to the registered monitoring plan.

5.5. Compliance with the monitoring methodology

The monitoring system is in compliance with the applied monitoring methodology (*<Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes, Version 1>*).

5.6. Monitoring parameters

During the verification all relevant monitoring parameters (as listed in chapter B.7.1 of the PDD) have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. The results as well as the verification procedure are described parameter-wise in the project specific verification checklist.

After appropriate corrections were carried out by the project participant it can be confirmed that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements.

The Gold Standard Sustainability Indicators were also checked by the verification team during the site visit. The parameters are a) Air quality, b) livelihood of the poor, c) Employment, d) employment quality, e) Access to energy services f) other pollutants.

The parameters a) Air quality, b) livelihood of the poor, c) Employment, d) employment quality, e) Access to energy services f) other pollutants were checked from the kitchen performance test (KPT) carried out by the Third Party, Berkley's 2010 Bi-Annual Monitoring of the Sewa Charcoal Stove Report, carried out in August 2010. This was also checked from the quarterly surveys carried out by the Berkley air. The Berkley air representative was also interviewed by the verification team for checking that these parameters were monitored by them and how they are doing the monitoring.

The parameters: air quality, livelihoods of the poor, access to energy services and other pollutants; were also cross checked by the verification team by doing house-to-house visits and interviews of 50 households during the site visit. The employment and employment quality parameters were checked during site visit to the Katene

facility and interviewing employees and management. Total number of persons employed was stated as 20 in the MR however during onsite visit, it was established that the employees were 18. CAR P1 as raised for this matter to be corrected. The MR was revised accordingly and CAR P1 was closed. Further, CAR P2 was raised concerning the monitoring of the employment quality parameter. The CAR was successfully closed as a new monitoring measure for this parameter was introduced based on level of salary which is above the host country minimum wage. This was found to be adequate. The MR was revised appropriately.

CL P4 was raised regarding the calculation of non-renewable biomass. The PP updated the MR using non-renewable biomass estimates from Government sources. The draft MR had NRB estimates of 51% for charcoal and 54% for wood in the 2010 NRB Study this was updated to 67% for charcoal and 67% for wood. This increased the ER for this monitoring period from 58,508t to 70,068t. Appropriate changes were made to the MR that reflected proper calculation of non-renewable biomass, hence the clarification was closed.

CL P5 and CL P6 were raised due to inconsistencies in the monitoring frequencies that were not consistent with the monitoring plan. The PP made changes to the MR. The final MR is consistent with the monitoring plan. Hence the clarifications were closed.

FAR P3 was raised to have ceramic liner production figures reflected in the sales record. This would increase the traceability of the sales record. This will be checked during next verification.

5.7. Monitoring report

A draft monitoring report was submitted to the verification team by the project participants.

During the verification, mistakes and needs for clarification were identified. The PP has carried out the requested corrections so that it can be confirmed that the Monitoring Report version 06 is complete and transparent and in accordance with the registered GS-VER-PDD and other relevant requirements.

CAR R1 was raised due to editorial errors that were identified in the draft monitoring report submitted by the PP. This was corrected and the final MR version 06 has no editorial errors. Hence CAR R1 was closed. CAR R2 was raised to include in the draft MR information comparing ER estimation ex-ante and ER ex-post. The PP added a table in the section D.4.3 of the MR comparing ex-ante and ex-post ER and hence the CAR was closed.

5.8. ER Calculation

During the verification there were no mistakes in the ER calculation identified. The ER calculation is developed from the ER calculator software developed by the Third

Party, Berkeley Air. However some summation inconsistencies were identified and CL C1 was raised. The PP responded that this was due to rounding off decimal figures instead of making summation of decimals. Table D.4.2 in the final MR was corrected to reflect exact summation figures. Thus it is confirmed that the ER calculation is overall correct.

5.9. Quality Management

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving, calibration, maintenance and training of personnel in the framework of this GS project activity have been defined. The procedures defined can be assessed as appropriate for the purpose. No significant deviations thereof have been observed during the verification.

The Quality management procedures mentioned in registered GS-VER-PDD were checked during verification site visit. The PP provided the data collected, also showed how data is stored and archived. Training of personnel was also checked by the verification team. During the site visit it was found that the masons and supervisors were provided training by Katene Kadji. This was also verified by interviewing the Katene Kadji's Director Mr. Ousmanne. CAR Q2 was raised for information related to employee and third party surveyors training manuals. The PP provided the training manuals for both the masons and the 3rd party surveyors. Hence CAR Q2 was closed.

The third party, Berkley Air Monitoring Group, representative carried out the quarterly surveys and the kitchen performance tests (KPT). The weighing scales for monitoring charcoal consumption by the end user in KPT had to be calibrated. CAR Q3 was raised to ensure that the weighing scales were calibrated and PP provided the calibration certificate from the equipment manufacturer. Hence the CAR was closed.

Two FARs were raised on data management. FAR Q1 was raised for the provision of troubleshooting procedures in case of disparity between sales data between the stove sellers and the record of stove liner delivery from Katene. Further, the verification team informed the PP that data has to be stored for a period of more than 2 years after the crediting period and hence it has to be archived in a secure place. FAR Q4 was raised for this purpose.

5.10. Overall Aspects of the Verification

All necessary and requested documentation was provided by the project participants so that a complete verification of all relevant issues could be carried out.

Access was granted to all installations of the plant which are relevant for the project performance and the monitoring activities.

No issues have been identified indicating that the implementation of the project activity and the steps to claim emission reductions are not compliant with the GS criteria and relevant guidance provided by the GS and the secretariat.

5.11. Hints for next periodic Verification

3 FARs were raised in the course of this verification exercise. FAR P3; to make the sales record more traceable by including data on ceramic liners delivered to the artisans by Katene. FAR Q1; to provide troubleshooting procedures to indicate how inconsistencies in records of sellers and Katene will be addressed. FAR Q4 is on secure data storage. These FARs needs to be checked during the next verification.

6. VERIFICATION OPINION

E+ Carbon has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 2nd periodic verification of the project: “Improved Household Charcoal Stoves in Mali”, with regard to the relevant requirements for GS project activities. The project reduces GHG emissions due to fuel-efficient charcoal stoves. The project is based on pilot work by Katene Kadji, Mali. It is owned and managed by trained local entrepreneurs. This verification covers the period from 2009-09-09 to 2010-08-31 (including both days).

In the course of the verification 10 Corrective Action Requests (CAR) and 5 Clarification Requests (CL) were raised and successfully closed. Furthermore 3 FARs are raised to improve the monitoring system and data storage in the future. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the registered GS-VER-PDD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant.

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved GS methodology ,i.e., Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes, Version 1
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the 2nd periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Emission reductions: **70068** t CO_{2e}

Essen, 2011-07-05



Rainer Winter
TÜV NORD JI/CDM Certification Program
Verification Team Leader

Essen, 2011-07-05



Eric Krupp
TÜV NORD JI/CDM Certification Program
Final Approval

7. REFERENCES

Table 7-1: Documents provided by the project participant(s)

Reference	Document
/BS/	Bi-Annual Monitoring of the Sewa Charcoal Stove, Katene Kadji, Mali by Berkeley Air Monitoring Group date August 2010
/BSR/	Baseline Survey report f E+ Carbon dated 3 rd January 2008
/CAL/	Certificate of Calibration for the T 50 Model Number 25kg x 250g capacity signed by Yamato Corporation 17 May 2007
/EMP/	Katene Kadji employment contracts, “Contrat de Travail”
/KPT/	Kitchen performance test from Berkley Air of August 2010
/MR/	Monitoring Report, “Improved Household Charcoal Stoves in Mali“ for the monitoring period 09-09-2009 to 31-08-2010
/MR06/	Monitoring Report “Improved Household Charcoal Stoves in Mali“ for the monitoring period 09-09-2009 to 31-08-2010 Version 6
/NRB/	<ul style="list-style-type: none"> • “2010 NRB Study for Mali” • “Note Synthetique sur quelques donnees du schema a’approvisionnement en bois energie de la ville de Bamako Actualise en 2006”, November 2010
/PDD/	GS-VER-PDD, Improved Household Charcoal Stoves in Mali, August 2009
/QS/	<ul style="list-style-type: none"> • Quarterly Survey Report from Berkley Air of 09 November 2009 for the period 20 July to 17 September 2009. • Quarterly Survey Report from Berkley Air of 09 April 2009 for the period 28 December to 16 January 2010. • Quarterly Survey Reports from Berkley Air of 08 June 2010 for the period 09-23 April 2010.
/ReVER/	Retroactive Verification Report, dated 26-05-2010
/TM/	Training Manuals: <ul style="list-style-type: none"> • “Katene Guide de formation” training manual for Katene masons &

Reference	Document
	artisans <ul style="list-style-type: none"> • “Kitchen Performance Test (KPT)” Berkeley KPT Training Guide
/VAL/	Validation Report, Improved Household Charcoal Stoves in Mali, dated 24 th August 2009
/XL-6/	Individual ER Excel calculation sheets for SGF, GF, MF, PF and TF type of stoves.
/XL-summary/	ER Summary spreadsheet from 09-09-2009 to 31-08-2010
/XL-TS/	Total Sales record Spreadsheet from 09-09-2009 to 31-08-2010

Table 7-2: Background investigation and assessment documents

/CPM/	TÜV Nord JI / CDM CP Manual (incl. CP procedures and forms)
/EB47-A27/	EB 47 report, Annex 27, Draft General Guidelines on Sampling and Surveys
/GSDM/	The Gold Standard Developers Manual, Version 5, dated May 2006
/GSPDD/	Gold Standard Project Design Document for Gold Standard Voluntary Offset Projects (GS-VER-PDD) with explanation to fulfilment.
/GS-VVM/	The Gold Standard Validation and Verification Manual for Voluntary Offset Projects, dated June 2007
/IPCC-GP/	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
/IPCC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book
/KP/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)
/METH/	Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes (Version 1)

/PDD/	Project Design Document for GS VCS project: “Improved Household Charcoal Stoves in Mali” version 3.1, dated 2009-09-05
/TA/	Tool for the demonstration and assessment of additionality (Ver 5)
/VAL/	Validation Report for GS VCS project “Improved Household Charcoal Stoves in Mali” version 3, dated 2009-08-24
/VVM/	UNFCCC Validation and Verification Manual (Version as per EB 55)

Table 7-3: Websites used

Reference	Link	Organisation
/GS/	www.cdmgoldstandard.org	The Gold Standard
/unfccc/	http://cdm.unfccc.int	UNFCCC
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Ousmane Samassekou	Director, Katene Kadji
/IM01/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Catherine Diam-Valla	Carbon Finance Officer, E+Carbon
/IM01/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mariam Tienou	Berkeley Air local Surveyor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Issa Mariko	Stoves reseller/Artisan
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Barry Mamadou	Commercial Agent, Katene Kadji
/IM02/	V	<input type="checkbox"/> Mr.	Anna Fanta	Sewa owner

Reference	Mol ¹		Name	Organisation / Function
		<input checked="" type="checkbox"/> Ms		
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mansssitan Kane	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Ceila Toure	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Pai Kone	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Fatou Sidibe	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Adia Doumbia	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Dieneba Camara	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Alima Maisa	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Oumau Diko	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Samou Bibata	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Diatou Diakite	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mama Sidla	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Adam Bah	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Keita Bisstou Soumane	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mai Sanago	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Fatoumata Magato	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Aissat Cisse	Sewa owner

Reference	Mol ¹		Name	Organisation / Function
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Kadiatou Coulibaly	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Rokia Toure	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Dado Camara	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Baty Suffa	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Djeneba Traore	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Awa Goita	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Aiba Coulibaly	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Madjou Konate	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Aminatou Sou	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Lalaicha Toure	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mousa Coulibaly	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Yayi Kouyate	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Coumba Kante	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Samake Sajiadou	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Madjou Konate	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Tama Coulibaly	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Madjou Konate	Sewa owner

Reference	Mol ¹		Name	Organisation / Function
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Amadou Wane	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Lamine Sy	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Fall Badala	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mai Kalabar-Coura	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Bintou Haidara	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Mamadou Gathan	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Kekia Dialla	Sewa owner
/IM02/	V	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Sadia Fafana	Sewa owner
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Sekou Kanta	Head of control, Forestry Department, Government of Mali
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Amadou Kassambara	Director, Wood Energy Supply, Malian Agency for Domestic Energy and Rural Electrification (AMADER)
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Cheick Oumar Toure	In-charge of wood markets, AMADER

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Verification Protocol
- A2:** Appointment / Authorisation statements



ANNEX 1: VERIFICATION PROTOCOL

Table A-1: GHG calculation procedures and management control testing / detailed audit testing of residual risk areas and random testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
Raw data generation				
<ul style="list-style-type: none"> • Installation of measuring equipment • Dysfunction of installed equipment • Maloperation by operational personnel • Downtimes of equipment • Exchange of equipment • Change of measurement equipment characteristic • Insufficient accuracy • Change of 	<ul style="list-style-type: none"> • Installation of modern and state of the art equipment • Process control automation • Internal data review • Regular visual inspections of installed equipment • Only skilled and trained personnel operates the relevant equipment • Daily raw data checks • Immediate exchange of dysfunctional equipment 	<ul style="list-style-type: none"> • Inadequate installation / operation of the monitoring equipment • Inadequate exchange of equipment • Change of personnel • Undetected measurement errors • Inappropriateness of Management system procedures w.r.t. monitoring plan requirements (e.g. substitute value strategies) • Non-application of management system procedures 	<ul style="list-style-type: none"> • Site – visit (maintenance dept., gas supplier) • Check of equipment • Check of technical data sheets • Check of suppliers information / guarantees • Check of calibration records, if applicable • Check of maintenance records • Counter-check of raw data and commercial data • Check of CDM management system 	<ul style="list-style-type: none"> • See Table A-2



Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<ul style="list-style-type: none"> technology Accuracy of values supplied by Third Parties 	<ul style="list-style-type: none"> Stand-by duty is organized Training Internal audit procedures Internal check of QA/QC measures of involved Third Parties 	<ul style="list-style-type: none"> Insufficient accuracy Inappropriate QA/QC measures of Third Parties 	<ul style="list-style-type: none"> Check of CDM related procedures Application of CDM management system procedures Check of trainings Check of responsibilities Check of QA/QC documentation / evidences of involved Third Parties 	
Raw data collection and data aggregation				
<ul style="list-style-type: none"> Wrong data transfer from raw data to daily and monthly aggregated reporting forms IT Systems Spread sheet programming Manual data transmission 	<ul style="list-style-type: none"> Cross-check of data Plausibility checks of various parameters. Appropriate archiving system Clear allocation of responsibilities Application of CDM Management system procedures 	<ul style="list-style-type: none"> Unintended usage of old data that has been revised Incomplete documentation Ex-post corrections of records Ambiguous sources of information Non-application of management system procedures 	<ul style="list-style-type: none"> Check of data aggregation steps Counter-calculation Data integrity checks by means of graphical data analysis and calculation of specific performance figures Check of management system certification 	<ul style="list-style-type: none"> See Table A-2



Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<ul style="list-style-type: none"> Data protection Responsibilities 	<ul style="list-style-type: none"> Usage of standard software solutions (Spreadsheets) Limited access to IT systems Data protection procedures 	<ul style="list-style-type: none"> Manual data transfer mistakes Unintended change of spread sheet programming or data base entries Problems caused by updating/upgrading or change of applied software 	<ul style="list-style-type: none"> Check of data archiving system Check of application of Management system procedures 	
Other calculation parameters				
<ul style="list-style-type: none"> Emission factors, oxidation factors, coefficients 	<ul style="list-style-type: none"> The values and data sources applied are defined in the PDD and monitoring plan 	<ul style="list-style-type: none"> Unintended or intended Modification of calculation parameters Wrong application of values Misinterpretations of the applied methodology and/ or the PDD Missing update of applicable regulatory framework (e.g. IPCC values) 	<ul style="list-style-type: none"> Update-check of regulatory framework Countercheck of the applied MP in the MR against the methodology and the PDD 	<ul style="list-style-type: none"> See Table A-2
Calculation Methods				



Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<ul style="list-style-type: none"> • Applied formulae • Miscalculation • Mistakes in spreadsheet calculation 	<ul style="list-style-type: none"> • Advanced calculation and reporting tools • A CDM coordinator is in charge of the CDM related calculations • Usage of tested / counterchecked Excel spreadsheets • Involvement of external consultants 	<ul style="list-style-type: none"> • The danger of miscalculation can only be minimized. 	<ul style="list-style-type: none"> • Countercheck on the basis of own calculation. • Spread sheet walk-through. • Plausibility checks • Check of plots 	<ul style="list-style-type: none"> • See Table A-2
Monitoring reporting				
<ul style="list-style-type: none"> • Data transfer to the author of the monitoring report • Data transfer to the monitoring report • Unintended use of outdated versions 	<ul style="list-style-type: none"> • An experienced CDM consultant is responsible for monitoring reporting. • CDM QMS procedures are defined 	<ul style="list-style-type: none"> • The danger of data transfer mistakes can only be minimized • Inappropriate application of QMS procedures 	<ul style="list-style-type: none"> • Counter check with evidences provided. • Audit of procedure application 	<ul style="list-style-type: none"> • See Table A-2



Table A-1: (Project specific) Periodic Verification Checklist

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
1. Project history				
<p>1.1 Open issues from validation (EB 55 Annex 1, §§ 181-183, 188c, 190c)</p> <p>Check (esp. in case of 1st periodic verification) whether there are any open issues indicated in the validation report (e.g. FAR)?</p>	<p>/VAL/ /ReVER/</p>	<p><i>Description:</i> Not applicable since this is the 2nd Verification.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i> N/A</p>	N/A	N/A
<p>1.2 Open issues from previous verification (EB 55 Annex 1, § 193)</p> <p>Check in case of further periodic verifications whether there are any open issues indicated in previous verification reports (FAR) and take into consideration the guidance as specified in VVM.</p>	<p>/MR/ /PDD/ /ReVER/ /IM01/ /BS/ /NRB/</p>	<p><i>Description:</i> The Retroactive Verification Report raised the following FARs:</p> <p>1) FAR regarding Non-Renewable Biomass Assessment. CAR H2 was raised. A new biannual Survey was carried out by a third party Berkeley Air Monitoring Group. The conclusion of the 2010 survey recommends the use of NRB from the 2008 assessment as no new data was available. However in November 2010 the host country government re-adjusted data on fuelwood collection in Bamako city based on which the PP re-adjusted upwards the NRB fraction. The verification team further interviewed government officials who produced the new NRB data. The CAR was closed.</p> <p>2) FAR regarding Leakage: CAR H3 was raised. According to the Berkeley 2010 Survey, there are no significant increases in GHG emissions that can be attributed to the project activity. The situation has not changed from the previous Study (2008).</p>	<p>CAR H1 CAR H2 CAR H3 CAR H4</p>	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>During onsite visit it was evident that the situation has not changed and hence this CAR was closed.</p> <p>3) FAR regarding New Stoves: CAR H4 was raised, No new stoves (types) were introduced to the market. The 2010 Berkeley Survey doesn't consider any new stoves. This was crosschecked during on site visit and hence this CAR was closed.</p> <p>4) FAR regarding possibility of data manipulation due to the huge amount of users and as well as data being obtained from 1st and 3rd party, i.e. the PP and Berkeley Air Monitoring Group. CAR H1 was raised. The PP explained procedures put in place to improve record keeping and traceability. The CAR was closed.</p> <p><i>Justification of evidences:</i> The verification team crosschecked the previous verification report to determine who FARs raised were addressed. The team assessed the MR, crosschecked supporting evidences and interviewed PP and other relevant officials as well as on undertook physical checks during onsite visit.</p> <p><i>Conclusion:</i> The verification team confirmed that all CARs were sufficiently addressed.</p>		
<p>1.3 Requests for Deviations / Revisions of MP (EB 55 Annex 1, §§ 201, 203, 212, 219)</p> <p><i>Check if there have been any requests for deviations from the registered monitoring plan or requests for</i></p>	<p>/IM01/ /gs/ /PDD/</p>	<p><i>Description:</i> According to MR there is no deviation from the Monitoring Plan.</p> <p><i>Justification of evidences:</i> Through desk review of the Monitoring Plan and the Monitoring Report.</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>revisions of the monitoring plan. If any, make sure that the monitoring report reflects the application of the approved guidance from the CDM EB regarding the Rfdev. and that those issues are subject to verification?</i>	/MR/	<i>Conclusion:</i> The verification team was able to determine that there was no deviation from the MP.		
1.4 Initial verification <i>In case an initial verification has been carried out, check if all FARs, recommendations etc. have been addressed appropriately.</i>	/MR/ /gs/	<i>Description:</i> N/A <i>Justification of evidences:</i> <i>Conclusion:</i> No initial verification was undertaken.	N/A	N/A
1.5 Initial project implementation (EB 55 Annex 1, §§ 182, 195-201) <i>In case of first periodic verification: Assess whether the project has been implemented and operated as per the registered PDD and are all physical features of the project in place? Further focus on the potential phase wise implementation and report on the corresponding statuses and starting dates accordingly.</i> <i>Also, discuss – if applicable – any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex 66/67).</i> <i>In case of further periodic verifications: Go to next</i>	/MR/ /gs/	<i>Description:</i> N/A – this is the 2 nd Verification <i>Justification of evidences:</i> <i>Conclusion:</i>	N/A	N/A



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>chapter.</i>				
2. Update on Changes and Incidents (during the Monitoring Period)				
<p>2.1 Technical equipment (EB 55 Annex 1, § 187)</p> <p><i>Check if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period. Further ensure that consistent designations of key equipment (meters etc.) in PDD, MR and calculation spreadsheet are applied</i></p> <p><i>Consider e.g. interviews with operational personnel, QMS records, maintenance records, instrument specifications.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i></p> <p><i>Also, discuss –if applicable- any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex 66/67).</i></p>	<p>/IM01/ /MR/ /PDD/</p>	<p><i>Description:</i> The project uses simple technology to develop energy efficient cook stoves. During this monitoring period no exchange of technology was evidenced and given the simplicity of the technology used exchange of technology is unlikely to occur.</p> <p><i>Justification of evidences:</i> The verification team reviewed relevant documents including the GS-VER-PDD and MR this was complimented with onsite assessment.</p> <p><i>Conclusion:</i> No relevant technical equipment of the project was exchange during this monitoring period.</p>	OK	OK
<p>2.2 Operation modes (EB 55 Annex 1, § 195)</p> <p><i>Check if relevant operation modes of the project</i></p>	<p>/IM01/ /PDD/ /MR/</p>	<p><i>Description:</i> There are no operation modes exchanges that occurred during this monitoring period. Given the simple technology used in the project, it is unlikely that exchange of operation modes will occur.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>activity have been exchanged or modified during the monitoring period.</i></p> <p><i>Consider e.g. interviews with operational personnel, operation log sheets, data management system records.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i></p> <p><i>Also, discuss – if applicable – any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex 66/67).</i></p>		<p><i>Justification of evidences:</i> The verification team did a desk review of the PDD, MR and sales records; and carried out interviews during onsite visit.</p> <p><i>Conclusion:</i> There has not been any changes to the operation modes of the project activity. The Project is still in line with the registered GS-VER-PDD.</p>		
<p>2.3 Incidents (EB 55 Annex 1, § 187, 208a)</p> <p><i>Identify if there have been any significant incidents, deviant operation modes and / or downtimes of the equipment?</i></p> <p><i>Consider e.g. interviews with operational personnel, operational log sheets, analysis of performance data.</i></p>	/IM01/ /MR/	<p><i>Description:</i> There no evidence of any incidents, deviant operation modes or downtimes witnessed during this monitoring period.</p> <p><i>Justification of evidences:</i> To ascertain this claim, the verification team interviewed Katene Kadji personnel, resellers and analysed production log sheets covering this monitoring period.</p> <p><i>Conclusion:</i> It is concluded that no incidents occurred during this monitoring period.</p>	OK	OK
<p>2.4 Personnel</p>	/IM01/	<p><i>Description:</i> The Katene Kadji is a relative small establishment</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Identify, if relevant personnel w.r.t. monitoring has been exchanged?</i></p> <p><i>In case of changes, assure that the implemented monitoring procedures have not been affected.</i></p>	/MR/	<p>with management of 3 key personnel and the rest being masons. The personnel responsible for monitoring remain the same as in the previous verification.</p> <p><i>Justification of evidences:</i> The verification team interviewed personnel hired by Katene Kadji and crosschecked the employment contracts to ascertain information contained in the MR.</p> <p><i>Conclusion:</i> The relevant staff at Katene remain unchanged.</p>		
<p>2.5 Legislation</p> <p>Find out whether relevant legislation with effect on the project activity in the host country has been changed. In any case data source shall be referenced.</p>	/IM03/ /MR/ /ReVER/	<p><i>Description:</i> There has been no change of relevant legislation in the host country that would affect the project.</p> <p><i>Justification of evidences:</i> The verification team interviewed the Director in charge of wood supply in the Malian Energy Agency and the Head of the Forestry control at the Malian Department of Forestry.</p> <p><i>Conclusion:</i> No legislation changes have taken place that would affect the project.</p>	OK	OK
<p>3. Monitoring Report – General</p>				
<p>3.1 Monitoring period</p> <p>Check if the monitoring period is in line with a) the</p>	/PDD/ /MR/	<p><i>Description:</i> The monitoring period is in line with the crediting period and the previous monitoring period which run from 27</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>crediting period and/or b) previous monitoring periods?</i>	/ReVER/ /gs/	November 2007 to 08 September 2009 both dates included. <i>Justification of evidences:</i> The verifier crosschecked the crediting period stated in the registered PDD; the MR and the retroactive verification report. <i>Conclusion:</i> The monitoring period lasts from 2009-09-09 to 2010-08-31. Both days are included.		
3.2 Publication of the Monitoring Report <i>Check if the monitoring report has been made publicly available on the UNFCCC website before the verification commenced.</i>	/gs/	<i>Description:</i> N/A – this is a Gold Standard project. <i>Justification of evidences:</i> <i>Conclusion:</i>	N/A	N/A
3.3 References <i>Check if the monitoring report provides the correct references, in detail: project title, UNFCCC registration No., applied methodology/ies, meth tools.</i>	/MR/ /PDD/	<i>Description:</i> The PP submitted the draft Monitoring Report to the verification team. The GS registration no GS 414 as well as the project title and applied methodology is mentioned correctly in the MR, nevertheless, the following errors were identified: <ul style="list-style-type: none"> • the MR lacks a version number; • the MR has no date; • the information regarding the first and the last day of the monitoring period has to be given; • page 24 “usage for all stoves aged 1-2years...is 	CAR R1	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>accounted in the Age 0-1 worksheet”, this has to be explained.contains the correct references.</p> <p><i>Justification of evidences:</i> The verification team undertook a desk review of the draft MR and crosschecked it against the applied methodology and the registered PDD.</p> <p><i>Conclusion:</i> CAR R1 was raised.</p>		
<p>3.4 Completeness (EB 55 Annex 1, §§ 182, 195, 202, 206)</p> <p><i>Assess if the monitoring report is complete, i.e. have all relevant issues been addressed? The MR shall include: (i) The implementation status of the project during the monitoring period (ii) Monitoring systems and procedures incl. QA/QC system employed (iii) all parameters to be monitored and reported at the intervals required by the MP and the Meth (iv) information on calibration of monitoring instruments (v) Emission factors, IPCC default values etc. (vi) reference to any deviation request approved by the EB, (vii) calculation of ER including reference to formulae and methods used (viii) comparison of the actual ER claimed in the MP with the estimate in the registered PDD and explanation in case of significant increase.</i></p>	<p>/MR/ /MP/ /METH/</p>	<p>Yes all relevant issues are covered; in detail:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> (i) Implementation status <input checked="" type="checkbox"/> (ii) Monitoring systems and procedures (esp. QA/QC) <input type="checkbox"/> (iii) All parameters and corresponding intervals <input type="checkbox"/> (iv) Information on calibration of monitoring instruments <input checked="" type="checkbox"/> (v) Emission factors, IPCC default values etc. <input type="checkbox"/> (vi) Reference to deviations, if applicable N/A <input checked="" type="checkbox"/> (vii) Calculation of emission reductions <input type="checkbox"/> (viii) Comparison of actual ER with estimated ER as per PDD <p>Some of the relevant issues listed above are covered in detail in the draft MR. CL P5 and CL P6 were raised because some of the monitoring parameters were not monitored at the frequency stated in the MP. CAR R2 was raised because the draft MR did not compare actual ER with estimated ER as per GS-VER-PDD.</p>	<p>CL P5 CL P6 CAR R2 CAR Q3</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		CAR Q3 was raised because details on the equipment calibration was missing in the MR.		
3.5 Comparison of estimated and actual ER (EB 55 Annex 1, § 198c) <i>Have differences between the monitored ER and the ex-ante ER been reported and appropriately justified? Please assess potential impacts on baseline and additionality.</i>	/MR/ /PDD/	<i>Description:</i> The draft MR contains a summary of actual ER in this monitoring period in Table D.4.2. It does not contain a comparison of ex-ante ER and actual ER. <i>Justification of evidences:</i> This was verified through review of the MR. <i>Conclusion:</i> CAR R2 was raised.	CAR R2	OK
3.6 Transparency <i>Assess if the monitoring report is transparent, i.e. clear and unequivocal in all respect?</i>	/MR/ /MP/	<i>Description:</i> The MR contains all the relevant aspects necessary for verification. There are nonetheless issues related to monitoring parameters that will be discussed in the relevant chapter. <i>Justification of evidences:</i> The verification team checked the text of MR to ensure consistency with MP was checked. <i>Conclusion:</i> The MR is considered transparent.	OK	OK
3.7 Misstatements on general issues <i>Assess whether the monitoring report is free of material misstatements regarding issues other than the monitoring parameters.</i>	/MR/	The MR is free of material misstatements regarding issues other than the monitoring parameters. <ul style="list-style-type: none"> • • 	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>Discuss the monitoring parameters in detail in chapter “Monitoring Parameters”.</i>		<ul style="list-style-type: none"> • • • • 		
<p>3.8 Deviations from the validated monitoring plan (EB 55 Annex 1, §§ 196-197, 204-206, 211-212)</p> <p><i>Assess whether the MR is in line with the validated monitoring plan?</i></p> <p><i>In case of intended changes: Have they been approved by the UNFCCC?</i></p>	/MR/ /MP/ /IM01/	<p><i>Description:</i> There has been no deviation from the validated monitoring plan.</p> <p><i>Justification of evidences:</i> The verification team assessed the MR in comparison with the validated MP. Further, the verification team did physical inspection of the project during onsite visit.</p> <p><i>Conclusion:</i> It can be confirmed that there was no deviation from the MP.</p>	OK	OK
<p>3.9 Deviations from the approved methodology (EB 55 Annex 1, §§ 200, 201, 203)</p> <p><i>Assess whether the MR in line with the applied monitoring methodology?</i></p>	/MR/ /METH/ /IM01/	<p><i>Description:</i> There is no deviation from the approved applied GS methodology.</p> <p><i>Justification of evidences:</i> The verification team assessed the MR in comparison with the approved methodology. Further, the verification team did physical inspection of the project during onsite visit.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<i>Conclusion:</i> It can be confirmed that there was no deviation from the approved methodology.		
4. Monitoring Parameters <i>(List all parameters of the PDD chapter B.7.1; pl. copy the 6 lines below for each parameter)</i>				
4.1. Xnrb,bl,y		Description: Non-renewability status of woody biomass fuel in year y in baseline scenario		
a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i>	/IM01/ /IM03/ /PDD/ /MR/ /BS/	<p><i>Description:</i> The Parameter (Xnrb,bl,y) is monitored by Third Party i.e. Berkley air Monitoring as per applied GS Methodology. This has to be monitored once in two years as per the registered GS-VER-PDD monitoring plan basing on national data on changes in non-renewability of biomass. The Third Party Biannual report of August 2010 recommends maintaining the value of the 2008 baseline NRB study as no new data was available. The values are 51% for charcoal and 54% for fuel wood.</p> <p><i>Justification of evidences:</i> The verification team reviewed the third party Biannual report and interviewed Malian Government officials regarding biomass study.</p> <p><i>Conclusion:</i> There is need to clarify data sources used for the NRB calculation and to update it if necessary, hence CL P4 was raised.</p>	CL P4	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p>Determine whether the value given in the monitoring report is correct and sufficiently justified.</p> <p>In case of mistakes pl. provide details and descriptions of the CARs raised.</p>	/MR/ /METH/ /BS/ /IM03/	<p><input type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct</p> <p><i>Description:</i> The non-renewability status of woody biomass fuel mentioned in the MR is derived from the Third Party Biannual 2010 report.</p> <p><i>Justification of evidences:</i> The verification team reviewed relevant documents and interviewed forestry officials to establish the validity and conservativeness of the data used in the Third Party Biannual 2010 report.</p> <p><i>Conclusion:</i> The data sources used for the NRB calculation has to be provided. Refer to CL P4.</p>	GL-P4	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</p>	METH/ /MR/ /PDD/ /BS/	<p><i>Description:</i> This monitoring parameter has to be monitored on a bi-annual basis by a third Party. Berkeley Air undertook the 2010 NRB Study. This is in line with the validated monitoring plan and the GS applied methodology for this parameter.</p> <p><i>Justification of evidences:</i> The verification team reviewed the MR, MP, applied methodology and the third party 2010 NRB Study.</p> <p><i>Conclusion:</i> The correct QA/QC procedures for this monitoring</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	<p>/BS/ /MR/ /PDD/</p>	<p>parameter are in place.</p> <p><i>Description:</i> Refer to 4.1.(b) above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>CL-P4</p>	<p>OK</p>
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	<p>/IM01/ /IM03/ /MR/ /PDD/ /METH/ /BS/</p>	<p><i>Description:</i> Verification of this parameter was done by reviewing the 2008 NRB baseline study which remains the same for to 2010 according the 2010 third party report.</p> <p><i>Justification of evidences:</i> The verification team interviewed forestry stakeholders in Mali to establish whether the NRB values were valid.</p> <p><i>Conclusion:</i> CL P4 was raised as it is not clear how the data used for the calculation of non-renewable biomass were sourced.</p>	<p>CL-P4</p>	<p>OK</p>
<p>4.2. Xnrb,pj,y</p>		<p>Description: Non-renewability of woody biomass fuel in year y in project scenario</p>		



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM03/ /MR/ /PDD/ /METH/ /BS/	<p><i>Description:</i> This Parameter is monitored on a biannual basis as per the guidance of the methodology and registered monitoring plan. The 2010 assessment revealed that there no new data exist for Bamako and its supply area to update the 2008 study.</p> <p><i>Justification of evidences:</i> The verification team reviewed the MR, monitoring plan, applied GS methodology to crosscheck the processes taken by the third party. The team also interviewed Malian forestry officials on the non-renewability of woody biomass.</p> <p><i>Conclusion:</i> CL P4 was raised due to missing data sources for the NRB calculation.</p>	CL P4	OK
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM03/ /MR/ /PDD/ /METH/ /BS/	<p><i>Description:</i> The parameter Xnrb,pj,y, is measured by the third party bi-annually as per MP. The third party produced the 2010 NRB Study in August 2010.</p> <p><i>Justification of evidences:</i> The correctness of the value was checked by desk review of the PDD, methodology, the 2010 Biannual report by the Berkeley Air as well as through interviewing relevant officials in Bamako.</p> <p><i>Conclusion:</i> Although the parameter is measured by a third party and at correct intervals, there is need to provide data sources of for the NRB calculation and hence CL P4 was raised.</p>	CL P4	OK
<p>c) QA/QC Procedure</p>	/IM03/	<p><i>Description:</i> The Parameter is monitored by a third party on a biannual basis as per the guidance of the methodology and</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/MR/ /BS/ /PDD/ /METH/	<p>registered monitoring plan.</p> <p><i>Justification of evidences:</i> The QA/QC procedure were checked by reviewing the findings of the 2010 third party survey against the recommendations of the GS applied methodology and the QA/QC measures stated in the monitoring plan.</p> <p><i>Conclusion:</i> The QA/AC procedures are in line with the GS applied methodology and MP.</p>		
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/IM03/ /MR/ /PDD/ /METH/ /BS/	<p><i>Description:</i>The applied GS methodology and monitoring plan request biannual monitoring of this parameter. The 2010 NRB survey is the second Survey following the 2008 survey. The third party 2010 survey found no new data from the 2008 Survey and hence recommends the use of 2008 values (51% for charcoal and 54% for fuelwood).</p> <p><i>Justification of evidences:</i> The verification team assessed the accuracy of the values given to parameter by interviewing local officials regarding the biomass re-growth data.</p> <p><i>Conclusion:</i> CL P4 was raised because there is need to clarify how the data used in the NRB re-growth was established.</p>	CLP4	OK
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205,</p>	/IM03/ /MR/	<p><i>Description:</i> Please refer to checklist item above.</p>	CLP4	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	<p>/PDD/ /METH/ /BS/</p>	<p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>		
<p>4.3. Leakage</p>		<p>Description: Potential GHG emissions outside project boundary caused by project activity</p>		
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /IM02/ /MR/ /BS/ /QS/ /PDD/ /METH/</p>	<p><i>Description:</i> Leakage in the project activity is determined as potential GHG emissions outside the project boundary caused by the project activity. The project involves simple technology to develop energy efficient sewa stoves which are distributed to end users mainly in greater Bamako area. The third party in its 2010 usage study concludes that the price of charcoal has risen over the past 5 years and hence the consumption of charcoal cannot have increased due to the project activity.</p> <p><i>Justification of evidences:</i> Leakage was assessed by checking all sources of GHG in the project activity required by the GS methodology. The verification team reviewed the third party 2010 survey and quarterly surveys. The verifier also</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		interviewed stakeholders to establish whether there were any sources of leakage and concluded that there is no leakage in the project activity. <i>Conclusion:</i> It can be concluded that no GHG emissions outside the project boundary can be attributed to the project activity.		
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) Determine whether the value given in the monitoring report is correct and sufficiently justified. In case of mistakes pl. provide details and descriptions of the CARs raised.</p>	/IM01/ /IM02/ /BS/ /QS/ /MR/ /PDD/ /METH/	<p><i>Description:</i> There is no leakage in the project activity at present. 95% of the stoves are distributed around the Bamako area ^{/QS/} hence there are zero emissions outside the project boundary.</p> <p><i>Justification of evidences:</i> The information contained in the quarterly surveys was crosschecked by the verifier against interviews during onsite and by physical inspection.</p> <p><i>Conclusion:</i> The values used in the MR are correct as per registered monitoring plan and sufficiently justified.</p>	OK	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been</p>	/IM01/ /IM02/ /MR/ /QS/ /BS/	<p><i>Description:</i> The QA/QC procedures deployed by the PP include regular quarterly surveys to check for any changes in the leakage indicators stated in the methodology.</p> <p><i>Justification of evidences:</i> The verifier crosschecked this by reviewing quarterly monitoring data, the findings of the 2010</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>carried out by competent personnel.</i>	/PDD/ /METH/	biannual survey and onsite inspection and interviews. <i>Conclusion:</i> The QA/QC procedures stated in the applied methodology and MP for this parameter is the third party report. Hence the use of the 2010 Berkeley Air Biannual report is correct.		
d) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/IM01/ /IM02/ /MR/ /QS/ /BS/ /PDD/ /METH/	<i>Description:</i> Refer to Checklist item above. <i>Justification of evidences:</i> <i>Conclusion:</i>	OK	OK
e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b) <i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external /</i>	/IM01/ /IM02/ /MR/ /PDD/ /METH/	<i>Description:</i> This parameter was verified based on the guidance of the GS methodology and the registered MP. <i>Justification of evidences:</i> The value was verified on the basis of Quarterly Qualitative surveys the 2010 KPT. This was verified by interviewing IM01 and IM02 during the site visit. The verifier also interviewed Katene Kadji and reseller/artisans. <i>Conclusion:</i> The value is in line with methodology.	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i>				
4.4. Bbl,y		Description: Mass of woody biomass combusted in the baseline in year y		
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/ /KPT/	<p><i>Description:</i> The parameter is measured through Quarterly kitchen surveys (KS) carried by the third party. They evaluated the baseline over time by looking at a variety of fuel consumption relevant metrics within the longitudinal quarterly monitoring data, a rolling list of 50 new sewa customers each quarter. The relevant metrics employed in this analysis include total household size, number of household meals cooked per day and the number of charcoal, fulewood and liqified petroleum gas (LPG) stove uses/household/per day before the purchase of the sewa. The KS were carried out the following times: July 20-August 9, 2009; July 20- September, 17, 2009; December 28, 2009 – January 16, 2010; April 90-23, 2010. The survey indicate that clusters are still representative of the population and hence the third party recommends the use of 2008 baseline values of 1.058 tons/HH-year for charcoal; 1.168 tons/HH-year for wood^{/MR/}.</p> <p><i>Justification of evidences:</i> This was substantiated by interviews of IM01 and IM02 carried out during onsite visit by the verifier.</p> <p><i>Conclusion:</i> The measurement of this parameter is in line with GS monitoring plan. However the calibration certification of the</p>	GAR Q3 CLP6	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		weigh scale has to be provided (CAR Q3). There is an overlap in the KS for July 20- August 9, 2009 and July 20-September 17, 2009. Refer to CL P6.		
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /IM02/ /MR/ /BS/ /PDD/ /METH/	<p><i>Description:</i> The mass of woody biomass combusted in the baseline in year y is measured by kitchen survey. Berkeley Air carried out the Kitchen survey.</p> <p><i>Justification of evidences:</i> The correctness of values 1.058 tons/HH-year (charcoal) and 1.168 tons/HH-year (wood) was checked by interviewing the IM01 and IM02 during the site visit. The Berkley Air local surveyor was also interviewed.</p> <p><i>Conclusion:</i> The value given in the monitoring report is correct and sufficiently justified.</p>	OK	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/	<p><i>Description:</i>The third party carried out the KS. The</p> <p><i>Justification of evidences:</i> This was corroborated during onsite visit interviews of IM01 and IM02.</p> <p><i>Conclusion:</i> The QA/QC procedures are found to be in line with the registered PDD. However refer to CL P6.</p>	CL P6	OK
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance</i></p>	/IM01/ /IM02/ /MR/ /PDD/	<p><i>Description:</i> The measurement for this value obtained from the KS for the parameter is 1.058 tons/ HH-year (charcoal) and 1.168 tons/HH-year (wood) which was the same as the baseline.</p> <p><i>Justification of evidences:</i> The accuracy assessment was done</p>	CAR Q3	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/METH/	<p>through review of survey results and onsite interviews.</p> <p><i>Conclusion:</i> The value used for calculations of this parameter is accurate and as per third party 2010 Report. However the calibration certificate has to be provided. Refer to CAR Q3.</p>		
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/	<p><i>Description:</i> The verification was done on the basis of 2010 third party report.</p> <p><i>Justification of evidences:</i> This was further checked during onsite visit through interviews of Berkeley Air local surveyor and end users.</p> <p><i>Conclusion:</i> The measurement of this parameter is in line with the applied methodology and registered monitoring plan.</p>	OK	OK
<p>4.5. Bp_{j,y}</p>		<p>Description: Mass of woody biomass combusted in the project in year y</p>		
<p>a) Measurement / Determination method</p>	/IM01/	<p><i>Description:</i> This parameter is measured by sampling of the cluster population in 2008 baseline study and 2010 biannual</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM02/ /MR/ /BS/ /PDD/ /METH/	<p>study undertaken by the third party Berkley Air. The 2008 values of 0.766 tons/HH-year (charcoal) and 0.985 tons/HH-year (wood) were maintained because in the 2010 assessment the difference between aging stoves and new stoves was statistically insignificant.</p> <p><i>Justification of evidences:</i> This was also checked from the Quarterly surveys of the Berkley Air.</p> <p><i>Conclusion:</i> The measurement is in line with the applied methodology and registered monitoring plan.</p>		
<p>b) Correctness</p> <p>(EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /IM02/ /MR/ /BS/ /PDD/ /METH/	<p><i>Description:</i> The household fuel consumption was calculated by taking consumption of each of the stove types on a kilogram per person/day basis. A degradation factor of the stoves in terms of consumption of charcoal was determined by dividing the 2010 charcoal consumption by the 2008 charcoal consumption after the introduction of sewa. This degradation factor was then applied to the 2010 biannual monitoring data in order to calculate the 2010 charcoal savings estimate calculated as: 2010 charcoal saving= 2008 baseline charcoal use – (2008 project charcoal use multiplied by degradation factor)^{/BS/}.</p> <p><i>Justification of evidences:</i> The verification team reviewed the MR, MP and applied methodology and crosschecked the information with randomised door to door interviews.</p> <p><i>Conclusion:</i> The calculation was found to be in line with the applied methodology.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	<p>/IM01/ /IM02/ /MR/ /PDD/ /METH/</p>	<p><i>Description:</i> The third party, Berkeley Air carried out the Kitchen Surveys as described in the checklist item above.</p> <p><i>Justification of evidences:</i> The verification team crosschecked the values stated in the KS with real situation during onsite visit.</p> <p><i>Conclusion:</i> The QA/QC procedures are in line with the applied methodology and the MP. However the calibration certificate for the measuring scales has to be provided to the DOE, hence CAR Q3 was raised.</p>	<p>CAR Q3</p>	<p>OK</p>
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	<p>/IM01/ /IM02/ /MR/ /PDD/ /METH/</p>	<p><i>Description:</i> The value used for calculations of the mass of woody biomass combusted in the project scenario is derived from measurement undertaken during quarterly kitchen surveys by the third party (Berkeley Air) which is done using Salter Brecknell Electro Samson Digital hanging scales.</p> <p><i>Justification of evidences:</i> The verification team reviewed the relevant documents and interviewed Berkeley Air field staff to determine whether the measurements were done correctly.</p> <p><i>Conclusion:</i> The value is considered accurate. However the calibration certificate for the measuring scale was not provided and hence CAR Q3 was raised.</p>	<p>CAR Q3</p>	<p>OK</p>
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205,</p>	<p>/IM01/ /IM02/</p>	<p><i>Description:</i> The verification was done on the basis of the 2010 biannual third party report as per the guidance of the applied</p>	<p>CAR Q3</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>206b) <i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/MR/ /PDD/ /METH/	<p>methodology and monitoring plan..</p> <p><i>Justification of evidences:</i> The verification team undertook a desk review and also interviewed Berkeley Air field surveyor.</p> <p><i>Conclusion:</i> The measurement of the parameter is in line with the registered monitoring plan and applied methodology. However as stated earlier the calibration certificate for the measuring scale has to be provided to the DOE hence CAR Q3.</p>		
<p>4.6. Usage in year y</p>		<p>Description: Percentage of stoves of age x remaining in use in year y</p>		
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /IM02/ /BS/ /MR/ /PDD/ /METH/	<p><i>Description:</i> The Usage monitoring parameter is measured per the guidance of the applied methodology and MP, using the sales records and quarterly surveys by Berkley air. The 2010 biannual survey was administered to 100 households between 5-20 July 2010 giving a very low drop off rate of 89.4% still in use in their second year of purchase and 94.7% still in use in their first year of purchase^{/BS/}.</p> <p><i>Justification of evidences:</i> The verification team assessed the third party quarterly reports and interviewed 50 randomly chosen end users during onsite visit.</p>	GLP6 GLP7	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i> The verification team was able to confirm the very low drop off rate. Nonetheless, there is an overlap in the quarterly survey dates refer to CL P6 was raised. CL P7 was also raised due discrepancies between the sales data in the reseller hardcopy records and the excel record at Katene.</p>		
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e) <i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i> <i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /BS/ /METH/	<p><i>Description:</i> The correctness for the measure of this parameter is assessed using sales records and third party quarterly monitored survey reports. However the DOE found that the excel sales record had some discrepancies with hardcopy reseller records and hence CL P7 was raised.</p> <p><i>Justification of evidences:</i> The verification team took a sample of the hardcopy sales record from the resellers and compared it with the Katene excel sales.</p> <p><i>Conclusion:</i> The measure for this parameter in line with applied methodology and monitoring plan but CL P7 has to be rectified.</p>	CLP7	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206) <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/IM01/ /IM02/ /BS/ /QS/ /MR/ /PDD/	<p><i>Description:</i> QA/QC procedures for this parameter are described in the MR and MP. The data of quarterly surveys is maintained in quarterly survey reports by Berkley air third party. However during onsite visit the verification team found that the trouble shooting procedures were necessary in case of differences between the delivery from Katene to reseller/ blacksmiths and sales record of stoves by reseller/blacksmiths has to be developed and provided to all parties.</p>	FAR Q1 FAR P3	



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
	/METH/	<p><i>Justification of evidences:</i> The QA/QC procedures for this measurement were assessed by comparing what used by the PP and the requirements of the methodology and monitoring plan.</p> <p><i>Conclusion:</i> The troubleshooting procedures have to be checked during the next periodic verification. Refer to FAR Q1 and FAR P3.</p>		
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/IM01/ /IM02/ /BS/ /MR/ /PDD/ /METH/	<p><i>Description:</i> See comment above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	FAR Q1 FAR P3	
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC</i></p>	/IM01/ /IM02/ /BS/ /MR/ /PDD/ /METH/	<p><i>Description:</i> See comment in checklist item above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>				
<p>4.7. Age</p>		<p>Description: Adjustment to values of B_{pj,y} and AF_{pj,i,y} for stoves of age x</p>		
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203) <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /IM02/ /BS/ /MR/ /PDD/ /METH/</p>	<p>Description: The value of this parameter is measured on the basis of the registered PDD monitoring plan and the sales records. The third party carried out KPTs in 34 households from 12-15 July 2010 by four field surveyors. Charcoal and where applicable fuelwood or liquefied petroleum gas (LPG) were weighed daily using Salter Breknell ElectronSamson hand held scales. The survey was administered daily to record cooking stove information and fuel usage, the number and type of meals prepared, and the number and ages of people cooked for. Charcoal consumption of each stove type was calculated on kg/person/day. A degradation factor of the stoves in terms of their consumption was determined by calculating the ratio: (2010 charcoal consumption)/(2008 charcoal consumption after introduction of the sewa).</p> <p>Justification of evidences: The information contained in the 2010 KPT was corroborated with information from randomised household interviews the verifier carried during onsite visit.</p>	<p>GAR Q3</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i> The measurement is in line with the applied methodology and registered monitoring plan. However refer to CAR Q3 regarding the calibration certificate.</p>		
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	<p>/IM01/ /IM02/ /MR/ /PDD/ /METH/</p>	<p><i>Description:</i> The correctness is assessed by on the basis of the provisions of the registered PDD monitoring plan. The third party KT is undertaken bi-annually to measure fuel reduction performance.</p> <p><i>Justification of evidences:</i> The 2010 KPT survey results were crosschecked against information collected during randomised door to door visits and telephone interviews by the verification team.</p> <p><i>Conclusion:</i> The value used for this parameter is correct. However the calibration certificates for the weighing hand held scales used by the third party in the KPT have to be provided. Refer to CAR Q3.</p>	<p>CAR Q3</p>	<p>OK</p>
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	<p>/IM01/ /IM02/ /MR/ /PDD/ /METH/</p>	<p><i>Description:</i> The monitoring of this parameter was undertaken by a third party on a bi-annual basis.</p> <p><i>Justification of evidences:</i> The verification team confirmed that the 2010 KPT was undertaken by Berkeley Air, a third party. The previous KPT was carried in 2008, and hence the monitoring frequency is correct.</p> <p><i>Conclusion:</i> The QA/QC procedures for this parameter are in</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	<p>/IM01/ /IM02/ /MR/ /PDD/ /METH/</p>	<p>line with the monitoring plan.</p> <p><i>Description:</i> See checklist item above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	OK	OK
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	<p>/IM01/ /IM02/ /XLS/ /MR/ /PDD/ /METH/</p>	<p><i>Description:</i> See checklist item above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	OK	OK
<p>4.8. New Stove</p>		<p>Description: Adjustment to values of $B_{pj,y}$ and $AF_{pj,i,y}$ for new stove models</p>		



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/ /BS/	<p><i>Description:</i> There are no new stove models recorded in the 2010 Kitchen survey by the third party.</p> <p><i>Justification of evidences:</i> The assessment of new stove was done by reviewing the 2010 survey and the quarterly surveys and by interviews.</p> <p><i>Conclusion:</i> Based on the monitoring plan and applied methodology, the measurement of new stove is supposed to be assessed from the third party report done at a bi-annual frequency. Hence the measurement is in line with the registered plan and applied methodology.</p>	OK	OK
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/ /BS/	<p><i>Description:</i> The value is correct based on the findings of the 2010 third party survey report.</p> <p><i>Justification of evidences:</i> This was crosschecked by interviewing IM01 and IM02. The verifier confirmed that Katene has not produced any new stove model.</p> <p><i>Conclusion:</i> There was no new stove model introduced to the market during this monitoring period.</p>	OK	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p>	/IM01/ /IM02/	<p><i>Description:</i> The QA/QC for this project is the third party KPT. It was undertaken to check if a new stove model was launched</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/MR/ /PDD/ /METH/	<p>during this monitoring period. In this case there is no new model.</p> <p><i>Justification of evidences:</i> The verification team crosschecked the QA/QC procedures in the draft MR against those stated in the monitoring plan of the registered PDD and the applied methodology.</p> <p><i>Conclusion:</i> The QA/QC procedures are in line with the monitoring plan and applied methodology.</p>		
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/	<p><i>Description:</i> The data is accurate based on 2010 biannual Survey.</p> <p><i>Justification of evidences:</i> This information was further checked by the verification team during onsite visit and by interviewing IM01 and IM02.</p> <p><i>Conclusion:</i> The verification team confirmed that there no new stove models introduced during this monitoring period. The measure for this parameter is considered accurate.</p>	OK	OK
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data</i></p>	/IM01/ /IM02/ /IM03/	<p><i>Description:</i> Refer to checklist item above.</p> <p><i>Justification of evidences:</i></p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/MR/ /PDD/ /METH/	<p><i>Conclusion:</i></p>		
Sustainable Development Variables (Gold Standard Requirement)				
4.9. Air Quality				
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /METH/	<p><i>Description:</i> This parameter is monitored qualitatively through Kitchen survey (KS) performed by Berkley Air to assess indoor air pollution by assessing four relevant health indicators: itchy eyes, attacks of shortness of breath, attacks of coughing and burns while cooking.</p> <p><i>Justification of evidences:</i> The verifier carried out door to door interviews of stove end users. The end users reported better health conditions on all four indicators.</p> <p><i>Conclusion:</i> The measure was found to be in line with the GS registered monitoring plan.</p>	OK	OK
<p>b) Correctness</p>	/IM01/	<p><i>Description:</i> This parameter is measured through third party</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM02/ /MR/ /PDD/ /METH/	<p>kitchen surveys.</p> <p><i>Justification of evidences:</i> The verification team for 50 households randomly drawn from the sales record. Each household reported less smoke, reduced eye irritation and reduced coughing than the baseline stove.</p> <p><i>Conclusion:</i> The parameter was assessed correctly.</p>		
<p>c) QA/QC Procedure</p> <p>(EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/MR/ /SR/ /IM02/ /PDD/ /METH/	<p><i>Description:</i> The measure for this parameter is assessed qualitatively by the third party.</p> <p><i>Justification of evidences:</i> QA/QC procedures were checked by end user interviews.</p> <p><i>Conclusion:</i> The QA/QC procedures are met.</p>	OK	OK
<p>d) Accuracy</p> <p>(EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/MR/ /SR/ /IM02/ /PDD/ /METH/	<p><i>Description:</i> See checklist item.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	OK	OK
<p>e) Verification</p>	/IM01/	<p><i>Description:</i> See checklist item.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/IM02/ /MR/ /PDD/ /METH/	<p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>		
<p>4.10. Livelihood of the Poor</p>				
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring</i></p>	/IM01/ /IM02/ /MR/ /BS/ /PDD/	<p><i>Description:</i> The cost saving is calculated based on fuel saving and average local fuel prices at the time. This is done by Berkley Air in its quarterly surveys. The value stated in the MR is 75,993CFA/year per household.</p> <p><i>Justification of evidences:</i> The verification team interviewed 50 households to estimate the fuel cost saving in monetary terms due to use of improved cookstove.</p> <p><i>Conclusion:</i> The measurement for this indicator is in line with the monitoring plan.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>plan of the PDD and the applied methodology.</i>				
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /IM02/ /BS/ /QS/ /MR/ /ReVER/ /PDD	<p><i>Description:</i> The Quarterly surveys checks the amount of money the people are earning and how much they spend on fuel. The figure mentioned above is higher than the previous amount stated in the last verification (59,860 CFA/year). This is not due to increase in fuel consumption but rather due to charcoal price increases. The annual average money saving is 208 CFA reported in the Biannual report.</p> <p><i>Justification of evidences:</i> During onsite visit the verification team compared the data contained in the Quarterly surveys of Berkley Air and the interview by the users.</p> <p><i>Conclusion:</i> The value given to the monitoring parameter is correct.</p>	OK	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /QS/	<p><i>Description:</i> The third party undertook the quarterly surveys</p> <p><i>Justification of evidences:</i> The Quarterly survey information is crosschecked with interviews of Berkeley local survey and end user household.</p> <p><i>Conclusion:</i></p>	OK	OK
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p>	/IM01/ /IM02/	<p><i>Description:</i> See checklist item above.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/MR/ /PDD/	<p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>		
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/IM01/ /IM02/ /MR/ /PDD/	<p><i>Description:</i> The parameter is assessed qualitatively to estimate the amount of the household income is saved per year after the purchase of the sewa.</p> <p><i>Justification of evidences:</i> The information given in the sustainability report was assessed through review of baseline data and Quarterly surveys conducted by Berkley air and by interviewing the Berkley local surveyor and end user households.</p> <p><i>Conclusion:</i> The parameter assessment was found to be appropriate and in line with registered monitoring plan.</p>	OK	OK
<p>4.11. Employment</p>				
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was</i></p>	/IM01/ /MR/ /PDD/	<p><i>Description:</i> This parameter is measured by the number of jobs created by the project per year. It is stated in the MR that during this monitoring period four jobs were created bringing the total number of employees to 20.</p>	CAR P+	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p><i>Justification of evidences:</i> During onsite visit the verifier was able to confirm only 18 employees at Katene Kadji.</p> <p><i>Conclusion:</i> CAR P1 was raised regarding the discrepancy between the number of employees stated in the MR and those actually employed.</p>		
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /MR/ /PDD/	<p><i>Description:</i> The actual number of jobs created was not consistent with that stated in the MR. The verifier crosschecked employee contracts and interviewed Katene Kadji management and personnel ^{/IM01/}. Refer to CAR P1.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	CAR P1	OK
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/IM01/ /MR/ /PDD/	<p><i>Description:</i> The M&E reports which are supposed to be undertaken twice annual as the QA/QC procedures for this monitoring parameter.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i> However the M&E reports were not given to the verifier hence CAR P2 was raised.</p>	CAR P2	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/IM01/ /MR/ /PDD/	<p><i>Description:</i> Please refer to above comments for CAR P1 and CAR P2.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	CAR P1 CAR P2	OK
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/IM01/ /ReVER/ /MR/ /PDD/	<p><i>Description:</i> The number of new jobs created during this monitoring period was verified by checking the figure stated in the MR and the previous verification report against the actual number of employees at Katene Kadji.</p> <p><i>Justification of evidences:</i> The verifier found 18 employees with contract with Katene Kadji instead of 20 stated in the MR</p> <p><i>Conclusion:</i> CAR P1 was raised.</p>	CAR P1	OK
<p>4.12. Employment Quality</p>				
<p>a) Measurement / Determination method</p>	/IM01/	<p><i>Description:</i> This parameter is measured by qualitative assessment. Katene Kadji has so far 18 employees. From the</p>	CAR P2	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/MR/ /ReVER/ /PDD/</p>	<p>previous verification report, this parameter is supposed to be measured through Monitoring and Evaluation reports carried out twice annually.</p> <p><i>Justification of evidences:</i> The verification team checked the monitoring of this parameter in MR against the requirements of the MP. The verifier also interviewed employees at Katene and reviewed their work contracts.</p> <p><i>Conclusion:</i> CAR P2 was raised because the monitor and evaluation reports that were supposed to be undertaken twice annually were not provided to the verifier.</p>		
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	<p>/IM01/ /MR/ /PDD/</p>	<p><i>Description:</i> See comments above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>CAR P2 CAR P1</p>	<p>OK</p>
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	<p>/IM01/ /ReVER/ /MR/ /PDD/</p>	<p><i>Description:</i> This parameter is estimated based on the employee salary. The Monitoring and evaluation reports by the PP were supposed to be undertaken twice annually to monitor this parameter. This was changed to estimate the quality of employment by employee salary which is above the host country minimum wage.</p> <p><i>Justification of evidences:</i> The verification checked the MR</p>	<p>CAR P2</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		monitoring procedure against the MP. <i>Conclusion:</i> CAR P2 was raised for the PP to explain the measure for this parameter namely, monitoring and evaluation was not undertaken.		
d) Accuracy (EB 55 Annex 1, §§ 205c, 206a) <i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i>	/IM01/ /ReVER/ /MR/ /PDD/	<i>Description:</i> See comments above. <i>Justification of evidences:</i> <i>Conclusion:</i>	CAR P1 CAR P2	OK
e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b) <i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of</i>	/IM01/ /ReVER/ /PDD/ /MR/	<i>Description:</i> The employment quality measured through qualitative means. The PP in the previous monitoring report used the monitoring and evaluation reports carried out by E+Carbon. This has changed to estimate this parameter based on the host country minimum wage. Katene’s salary is above the Malian minimum wage. <i>Justification of evidences:</i> The quality of employment was verified on the basis of interviewing Katene Kadji management and employees and crosschecking employee contracts. <i>Conclusion:</i> Refer to CAR P1 and CAR P2.	CAR P1 CAR P2	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>frequency (time period between evidence) and in covering the full monitoring period.</i>				
4.13. Access to Energy Services				
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /IM02/ /MR/ /PDD/ /BS/	<p><i>Description:</i> This parameter is one of the GS sustainability measures for this project to assess the improvement in energy access in this monitoring period. It is monitored on the basis of annual sales from 01/01/09-31/12/09 of 16,815 stoves, and using Berkeley Air’s average household size number of 9.9. The value used is 166,468 people/year.</p> <p><i>Justification of evidence:</i> From the door to door visits and interviews of 50 end users the verification team found the figure used to be representative.</p> <p><i>Conclusion:</i> The measurement of this parameter is in line with the requirements of the monitoring plan.</p>	OK	OK
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p> <p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /IM02/ /MR/ /BS/ /PDD/	<p><i>Description:</i> The measure for this parameter is the number of people with access to energy per year. The value (166,468 people/year) is extrapolated from total sales (16,815) in the calendar year 2009 and average household size for 9.9.</p> <p><i>Justification of evidences:</i> The correctness of the value was evaluated by checking the sales records and third party quarterly kitchen survey results against responses from door to door interviews.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<i>Conclusion:</i> The monitoring process taken by the PP is in line with MP. The measurement of this parameter is considered correct.		
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	<p>/IM01/ /IM02/ /MR/ /BS/ /PDD/</p>	<p><i>Description:</i> This sustainable development indicator is calculated from the sales of stoves and the average household 9.9.</p> <p><i>Justification of evidences:</i> The verification team checked the third party 2010 report and also during onsite visit by interviewing IM01 and IM0.</p> <p><i>Conclusions:</i> QA/QC procedures are in place 2.</p>	OK	OK
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	<p>/IM01/ /IM02/ /MR/ /PDD/</p>	<p><i>Description:</i> The value for this parameter is extrapolated from sales records and average household size.</p> <p><i>Justification of evidences:</i> The accuracy of data is crosschecked by analysing sales records figures and those from the Berkley quarterly survey reports against the interview results from door to door kitchen interviews during onsite visit.</p> <p><i>Conclusion:</i> It is concluded that the values used are accurate.</p>	OK	OK
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data</i></p>	<p>/IM01/ /IM02/ /MR/</p>	<p><i>Description:</i> Please see comments above.</p> <p><i>Justification of evidences:</i></p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>generation, aggregation, to recording, calculation and reporting) for these parameters including the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>	/PDD/	<p><i>Conclusion:</i></p>		
<p>4.14. Other Pollutants</p>				
<p>a) Measurement / Determination method (EB 55 Annex 1, §§ 184-185, 202-203)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /IM02/ /MR/ /PDD/	<p><i>Description:</i> This parameter is measured as a Periodic assessment of Conditions to check for proper disposal of scrap metal undertaken by the third party. In this case, scrap metal is sold to peddlers who resell them to smelting companies. Empty paint cans are collected in bags to avoid excess release of fumes.</p> <p><i>Justification of evidences:</i> The verification team interviewed resellers/masons during onsite inspection.</p> <p><i>Conclusion:</i> The measurement of this parameter is consistent with the registered GS monitoring plan.</p>	OK	OK
<p>b) Correctness (EB 55 Annex 1, §§ 202, 206, 221e)</p>	/IM01/ /IM02/	<p><i>Description:</i> See checklist item above.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Determine whether the value given in the monitoring report is correct and sufficiently justified.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p>	/MR/ /PDD/	<p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>		
<p>c) QA/QC Procedure (EB 55 Annex 1, §§ 184b (vii), 205c, 206)</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p>	/IM01/ /IM02/ /MR/ /PDD/	<p><i>Description:</i> See checklist item.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	OK	OK
<p>d) Accuracy (EB 55 Annex 1, §§ 205c, 206a)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p>	/IM01/ /IM02/ /MR/ /PDD/	<p><i>Description:</i> Please see comment above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	OK	OK
<p>e) Verification (EB 55 Annex 1, §§ 184a, 184b, 186, 203, 205, 206b)</p> <p><i>Describe how the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the value</i></p>	/IM01/ /IM02/ /MR/ /PDD/	<p><i>Description:</i> Disposal of waste metal was verified by onsite visit interviews.</p> <p><i>Justification of evidences:</i> Disposal of waste metal was verified by comparing the MR and the responses from onsite visit interviews.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences (external / internal, oral or documented). Further whether sufficient evidence is available, both in terms of frequency (time period between evidence) and in covering the full monitoring period.</i></p>		<p><i>Conclusion:</i> It was confirmed that proper waste disposal was in place.</p>		
<p>5. ER Calculation</p>				
<p>5.1 Traceability (EB 55 Annex 1, § 182)</p> <p><i>Assess if the calculation is fully traceable. In case of complex calculations an Excel calculation spreadsheet shall be used. All applied formulae must be visible.</i></p>	<p>/XLS/ /METH/ /ReVER/ /MR/ /IM01/</p>	<p><i>Description:</i> The PP developed a sophisticated excel Emissions Reduction (ER) calculator that calculates total emissions reductions on a daily basis for each stove sold and for each stove size. The same system was used in the first monitoring period and is still in use.</p> <p><i>Justification of evidences:</i> The ER calculation traceability was assessed by comparing the hardcopy resellers record, the excel record kept by Katene and the electronic record kept by E+Carbon. The data was then traced to the excel ER calculator.</p> <p><i>Conclusion:</i> The ER calculation is traceable and the calculation can be reconstructed based on applied methodology and the registered PDD. However there is need to clarify summation inconsistencies in table D.4.2 of the MR (CL C1). Further, there were inconsistencies between the sales record „fiche de ventes“ hard copies and the excel sheet „points de Vente ou Nom du</p>	<p>GLC4 GLP7</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		Revendeur“(CL P7).		
<p>5.2 Parameter consistency (EB 55 Annex 1, § 186)</p> <p><i>Assess whether all internal and external parameters and data used for calculation are applied consistently in the monitoring report and the calculation spreadsheet?</i></p> <p><i>Consider only the correct data exchange between the monitoring report and the calculation spreadsheet (if any). Further ensure that consistent designations for parameters in PDD, MR, calculation spreadsheet are applied. The evaluation of the correctness of the parameter values itself should be discussed in the chapter “Monitoring Parameters”.</i></p>	/XLS/ /MR/ /IM01/	<p><i>Description:</i> The monitored parameters are consistent in the MR, applied methodology, excel spreadsheet and GS-VER-PDD.</p> <p><i>Justification of evidences:</i> The ER calculation was assessed by checking xls calculation against the formula contained in the applied methodology and GS-VER-PDD. The verification team also checked the data from sales records and from the 2010 biannual kitchen survey.</p> <p><i>Conclusion:</i> Nonetheless refer to CL P7.</p>	GL P7	OK
<p>5.3 Applied formulae (EB 55 Annex 1, §§ 204-206)</p> <p><i>Check if the applied formulae and methods for calculating baseline emissions, project emissions and leakage are in accordance with the monitoring plan and / or the approved methodology.</i></p>	/MR/ /XLS/ /PDD/ /METH/	<p><i>Description:</i> The applied formulae are based on the guidance of the applied methodology.</p> <p><i>Justification of evidences:</i> The verification team reviewed the formulae stated in the applied methodology and the GS-VER-PDD and compared to the formulae applied in the xls calculator.</p> <p><i>Conclusion:</i> The applied formulae were found to be acceptable as per the GS guidance.</p>	OK	OK
<p>5.4 Completeness of calculation</p>	/MR/	<p><i>Description:</i> The ER calculation is assessed as complete based</p>	GL P7	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 55 Annex 1, § 205a)</p> <p><i>Assess whether the provided calculations are complete and reflect all requirements of the monitoring plan.</i></p> <p><i>Check especially that no standard or old values have been used for calculation where calculations based on up-to-date data is required.</i></p>	<p>/XLS/ /PDD/ /METH/</p>	<p>on the recommendations of the GS applied methodology and the registered GS-VER-PDD.</p> <p><i>Justification of evidences:</i> The completeness of calculations was verified by checking the data and applied formulae used in the xls calculator.</p> <p><i>Conclusion:</i> However refer to CL P7.</p>		
<p>6. Quality Management; defined organisational structure, responsibilities and competencies Internal QA/QC and document control</p>				
<p>6.1 Management System</p> <p>(EB 55 Annex 1, § 184 a (iii))</p> <p><i>Check if the GHG data monitoring system is embedded in a (certified) company quality management system, if so, check if all CDM monitoring procedures been fully integrated in the project participant's quality management system. If not how the GHG management system has been implemented.</i></p>	<p>/MR/ /XLS/ /MP/ /IM01/ /IM02/</p>	<p><i>Description:</i> The management system was assessed through checking the consistency of the data monitoring in place against the requirements of the MP.</p> <p>The management system deployed by the PP enables proper monitoring of GHG.</p> <p><i>Justification of evidences:</i> The DOE assessed the monitoring systems deployed by the PP in particular how the sales record is generated. Stakeholders in the process ^{/IM01,IM02/} were interviewed. The verification team further checked MR against the monitoring provisions stated in the MP.</p>	<p>FAR P3 FAR Q1 FAR Q4</p>	



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i> However there is need to improve the data storage and handling system at the entry level (Katene Kadji and local artisans). Hence FAR P3, FAR Q1 and FAR Q4 were raised and have to be verified during the next verification.</p>		
<p>6.2 Roles and Positions</p> <p><i>Check if all roles and positions of each person in the GHG data management process are clearly defined and implemented as stated in the monitoring plan. Please consider the complete data trail from raw data generation to submission of the final data.</i></p> <p><i>Check further if only duly qualified personnel is involved in the monitoring procedures.</i></p>	<p>/MR/ /PDD/ /IM01/ /IM02/</p>	<p><i>Description:</i> The PP has a responsibility structure with different roles assigned by such that monitoring tasks are undertaken by a third party (Berkeley Air Monitoring Group); the project participant, E+Carbon maintains the electronic sales record developed from data generated from the Katene excel record and the hardcopy data from resellers.</p> <p><i>Justification of evidences:</i> The verification team interviewed Katene, E+Carbon and Berkeley Air staff.</p> <p><i>Conclusion:</i> The roles and responsibilities are clearly defined in the MR.</p>	<p>OK</p>	<p>OK</p>
<p>6.3 Trainings</p> <p><i>Check if initial trainings have been carried out, in case deemed necessary.</i></p>	<p>/MR/ /IM01/ /IM02/</p>	<p><i>Description:</i> The third party trains local surveyors who undertake quarterly kitchen surveys and the local PP Katene Kadji trains local ceramic artisans and metal workers as well as stove buyers on proper use of stoves.</p> <p><i>Justification of evidences:</i> The verifier interviewed the Katene personnel and management as well as the third party field staff.</p>	<p>CAR Q2</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i> However it was not possible to determine the level of training given because the training manuals for the Katene employees and the third party surveyors were not provided, hence CAR Q2.</p>		
<p>6.4 Troubleshooting procedures <i>Describe relevant troubleshooting measures and assess whether these troubleshooting procedures have been implemented.</i></p>	<p>/MR/ /PDD/ /IM01/ /IM02/</p>	<p><i>Description:</i> The troubleshooting procedures in the MR are only for stove end users and resellers. These are basic instructions both written and verbal on how to use and care for the stove.</p> <p><i>Justification of evidences:</i> This was assessed through document review and onsite inspection.</p> <p><i>Conclusion:</i> However as regards sales record keeping, there are no troubleshooting procedures to resolve inconsistencies when the ceramic liner deliveries and total stove sales vary (Refer to FAR P3, FAR Q1).</p>	<p>FAR P3 FAR Q1</p>	
<p>6.5 Maintenance procedures Are appropriate maintenance procedures in place?</p>	<p>/MR/ /PDD/ /IM01/ /IM02/</p>	<p><i>Description:</i> The PP encourages stove users to keep the stoves even when the ceramic liner is broken as the PP can cost effectively replace it.</p> <p><i>Justification of evidences:</i> This is assessed through onsite interview of sewa users.</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p><i>Conclusion:</i> The maintenance procedures are in place and sufficient.</p>		
<p>6.6 Internal QA/QC</p> <p><i>Assess whether there are any procedures in place on when, where and how checks and reviews of relevant monitoring parameters as well as further processing of the same are to be carried out. Please determine the evidences to be documented. (This might include spot checks by a second person not performing the calculations over manual data transfers, changes in assumptions and the overall reliability of the calculation processes.)</i></p>	<p>/MR/ /PDD/ /IM01/ /IM02/</p>	<p><i>Description:</i> Through the excel system maintained by E+Carbon, the local PP tracks records of ceramic liners produced and distributed through its artisan networks, which is then checked against sales records data quarterly to ensure consistency.</p> <p>The verifier found some inconsistency between the reseller records and the Katene sales record (Refer to CL P7).</p> <p><i>Justification of evidences:</i> Internal AQ/QC procedures were checked by desk review and physical inspection during onsite.</p> <p><i>Conclusion:</i> Trouble shooting procedures in case of differences between the delivery from Katene to reseller/ blacksmiths and sales record of stoves by reseller/blacksmiths has to be developed and provided to all parties. This has to be checked during the next periodic verification (FAR Q1).</p>	<p>CL P7 FAR Q1</p>	
<p>6.7 Data archive</p> <p>Check whether all records of monitoring parameters are archived according to the monitoring plan.</p>	<p>/MR/ PDD/ /IM01/ /IM02/</p>	<p><i>Description:</i> Please refer to comment above.</p> <p><i>Justification of evidences:</i></p> <p><i>Conclusion:</i></p>	<p>CL P7 FAR Q1</p>	



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>6.8 Data protection</p> <p>Assess whether appropriate measures have been taken in order to avoid unintended or intended manipulation of the measured data.</p>	<p>/MR/ /PDD/ /ReVER/ /IM01/ /IM02/</p>	<p><i>Description:</i> The PP has a record keeping system in place. However considering that data has to be kept for two years beyond the crediting period, better data protection has to be established.</p> <p><i>Justification of evidences:</i> Document protection was assessed during onsite visit. The verification checked the records both hardcopy and electronic kept by Katene and the resellers.</p> <p><i>Conclusion:</i> The verifier raised FAR Q4 to ensure that data protection measures are in place that would go beyond the crediting period. This has to be checked during the next verification.</p>	<p>CLP7 FAR Q1</p>	





ANNEX 2: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL



 <p style="text-align: center;">CERTIFICATE OF APPOINTMENT</p> <p>Mr. Dipl.-Ing. Rainer Winter born on 1963-02-21 satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby re-appointed as</p> <p style="text-align: center;">TÜV NORD JI/CDM Senior Assessor</p> <p>The present appointment will terminate on 2013-07-03 Certification registration No. 04 02 154-03 Initial appointment Assessor: 2004-03-01 Senior Assessor: 2007-07-07</p> <p>Essen, 2010-07-04</p>  <p style="text-align: center;"><small>Deputy of TÜV NORD JI/CDM Certification Program of TÜV NORD CERT GmbH</small></p>	 <p style="text-align: center;">Statement of Competence <small>Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program</small></p> <p style="text-align: center;">Mr. Rainer Winter</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>SCHEME</th> <th>STATUS</th> <th>VALID UNTIL</th> </tr> </thead> <tbody> <tr> <td>CDM</td> <td>Senior Assessor</td> <td>2013-07-03</td> </tr> <tr> <td>Validation_Verification</td> <td>Senior Assessor</td> <td>2013-07-03</td> </tr> <tr> <td>Ji</td> <td>Senior Assessor</td> <td>2013-07-03</td> </tr> <tr> <td>VCS</td> <td>Senior Assessor</td> <td>2013-07-03</td> </tr> </tbody> </table> <p style="text-align: center;"><small>Authorization status for technical areas within sectoral scopes:</small></p> <table border="1" style="width: 100%;"> <thead> <tr> <th>CODE</th> <th>TECHNICAL AREA</th> </tr> </thead> <tbody> <tr><td>1.1</td><td>Thermal Energy Generation</td></tr> <tr><td>1.2</td><td>Renewable Energies</td></tr> <tr><td>4.1</td><td>Cement Sector</td></tr> <tr><td>4.3</td><td>Iron and Steel</td></tr> <tr><td>4.5</td><td>Waste Heat Recovery</td></tr> <tr><td>5.1</td><td>Chemical Process Industries</td></tr> <tr><td>9.1</td><td>Metal Production</td></tr> <tr><td>11.1</td><td>Chemical Process Industries</td></tr> <tr><td>11.2</td><td>GHG Capture and Destruction</td></tr> <tr><td>12.1</td><td>Chemical Process Industries</td></tr> <tr><td>13.1</td><td>Waste Handling and Disposal</td></tr> </tbody> </table> <p style="text-align: center;"><small>003 – Rev. 3, Date: 2011-04-21</small></p> <p style="text-align: center;"><small>003_001-F003_2011-04-21_rev3</small></p>	SCHEME	STATUS	VALID UNTIL	CDM	Senior Assessor	2013-07-03	Validation_Verification	Senior Assessor	2013-07-03	Ji	Senior Assessor	2013-07-03	VCS	Senior Assessor	2013-07-03	CODE	TECHNICAL AREA	1.1	Thermal Energy Generation	1.2	Renewable Energies	4.1	Cement Sector	4.3	Iron and Steel	4.5	Waste Heat Recovery	5.1	Chemical Process Industries	9.1	Metal Production	11.1	Chemical Process Industries	11.2	GHG Capture and Destruction	12.1	Chemical Process Industries	13.1	Waste Handling and Disposal	 <p style="text-align: center;">CERTIFICATE OF APPOINTMENT</p> <p>Dr. Grzegorz Kochaniewicz born on 1963-02-01 satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby appointed as</p> <p style="text-align: center;">TÜV NORD CDM Assessor</p> <p>The present appointment will terminate on 2013-11-03 Certification registration No. 10 11 06 – 173 rev1</p> <p>Essen, 2010-11-04</p>  <p style="text-align: center;"><small>Head of TÜV NORD JI/CDM Certification Program of TÜV NORD CERT GmbH</small></p>
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<div style="text-align: right; margin-bottom: 20px;"> </div> <p style="text-align: center;">CERTIFICATE OF APPOINTMENT</p> <p>Ms. Katja Beyer born on 1980-01-08 satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby appointed as</p> <p style="text-align: center;">TÜV NORD JI/CDM Lead Assessor</p> <p>The present appointment will terminate on 2011-11-19 Certification registration No. 08 11 02 – 43 rev02 Essen, 2008-11-20</p> <div style="text-align: center; margin-top: 20px;"> <small>Head of TÜV NORD JI/CDM Certification Program of TÜV NORD CERT GmbH</small> </div>	<div style="text-align: right; margin-bottom: 20px;"> </div> <p style="text-align: center;">CERTIFICATE OF APPOINTMENT</p> <p>Mr. Lars Kirchner born on 1968-03-17 satisfies the requirements as specified in the TÜV NORD JI/CDM CP directives and is hereby appointed as</p> <p style="text-align: center;">TÜV NORD JI/CDM Assessor</p> <p>The present appointment will terminate on 2012-01-19 Certification registration No. 09 01 02 – 58 rev2 Essen, 2009-01-20</p> <div style="text-align: center; margin-top: 20px;"> <small>Head of TÜV NORD JI/CDM Certification Program of TÜV NORD CERT GmbH</small> </div>	<div style="text-align: right; margin-bottom: 20px;"> </div> <p style="text-align: center;">Statement of Competence <small>Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program</small></p> <p style="text-align: center;">Mr. Lars Kirchner</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th>SCHEME</th> <th>STATUS</th> <th>VALID UNTIL</th> </tr> </thead> <tbody> <tr> <td>CDM Validation, Verification</td> <td>Assessor</td> <td>2012-01-19</td> </tr> <tr> <td>Ji</td> <td>Assessor</td> <td>2012-01-19</td> </tr> <tr> <td>VCS</td> <td>Assessor</td> <td>2012-01-19</td> </tr> </tbody> </table> <p style="text-align: center; font-size: small;">Authorization status for technical areas within sectorial scopes:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>CODE</th> <th>TECHNICAL AREA</th> </tr> </thead> <tbody> <tr> <td>1.2</td> <td>Renewable Energies</td> </tr> <tr> <td>2.1</td> <td>Electricity distribution</td> </tr> <tr> <td>2.2</td> <td>Heat distribution</td> </tr> <tr> <td>3.1</td> <td>Energy demand</td> </tr> </tbody> </table> <p style="font-size: x-small;">058 – Rev. 0, Date: 2011-03-25</p>	SCHEME	STATUS	VALID UNTIL	CDM Validation, Verification	Assessor	2012-01-19	Ji	Assessor	2012-01-19	VCS	Assessor	2012-01-19	CODE	TECHNICAL AREA	1.2	Renewable Energies	2.1	Electricity distribution	2.2	Heat distribution	3.1	Energy demand
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058_S01-F003_2011-03-25_rev0

S01-F003 rev0 / 2010-04-19



CERTIFICATE OF APPOINTMENT

Mr. Dipl.-Ing. Eric Krupp

born on 1971-06-25

satisfies the requirements as specified in the TÜV NORD
JI/CDM CP directives and is hereby re-appointed as

TÜV NORD JI/CDM Senior Assessor

The present appointment will terminate on 2013-07-05

Certification registration No. 06 05 01 – 017

Initial appointment on 2007-07-06

Essen, 2010-11-29


Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH



Statement of Competence

Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Eric Krupp

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor	2013-07-05
Validation_Verification	Senior Assessor	2013-07-05
Ji	Senior Assessor	2013-07-05
VCS	Senior Assessor	2013-07-05

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal Energy Generation
7.1	Transport
9.1	Metal Production

017 – Rev. 1, Date: 2011-04-11

017_001F003_201104-11_rev1

001-F003 rev0 / 2010-04-19