



**Verified Carbon
Standard**

RECIPE FOR CHANGE GROUPED PROJECT

wonderbag.

Document Prepared By:
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Project Title	Recipe for Change Grouped Project
Version	3.0
Report ID	CCIPL834/VCSVAL/RCGP/20200727

Report Title	Recipe for Change Grouped Project
Client	Wonderbag UK Limited
Date of Issue	06-05-2021
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Summary:

A brief description of the validation and the project

Validation: Wonderbag UK Limited has commissioned Carbon Check (India) Private Ltd., to carry out the validation of the project “Recipe for Change Grouped Project”, as well as the first project activity instance (hereafter called project 1) with regards to the relevant requirements of VCS Standard Version 4.0 (dated 19/09/2019).

Project: The project “Recipe for Change Grouped Project”, is a grouped project which employs two small scale baseline and monitoring methodologies; AMS-II.C. version 15 (B02-a) and AMS-II.G. version 11.1 (B02-b). The project involves distribution of Heat retention cooking devices in kitchens throughout Republic of South Africa. The project results in reducing the amount of fossil fuels, electricity and non renewable biomass used for cooking. Through reduction in fossil fuel / electricity / biomass consumption, the programme will decrease greenhouse gas emissions.

The purpose and scope of validation

Purpose: The purpose of a validation is to have a thorough and independent assessment of the proposed project activity against the applicable VCS requirements, in particular, the project's baseline, monitoring plan and compliance with the relevant VCS and host Party criteria. These are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions. Carbon Check's objective is to perform a thorough, independent assessment of the validation of the project activity.

Scope: Validation scope is defined as an independent and objective review of the Project Description (PD). The PD is reviewed against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.0, dated 19/09/2019), VCS Standard (v4.0, dated 19/09/2019), Program Definitions (v4.0, dated 19/09/2019), Registration & Issuance Process (v4.0, dated 19/09/2019) VCS Validation and Verification Manual (v3.2, dated 19/10/2016) applicable at the time in order to confirm that the project meets the applicability conditions of the selected baseline and monitoring methodology, AMS-II C version 15.0 and AMS-II G version 11.1 also assess the claims and assumptions made in the PD without limitation on the information provided by the project participants.

The method and criteria used for validation

The validation consists of the following four phases:

I. A desk review of the project description documents

- A review of data and information;
- Cross checks between information provided in PD and information from sources with all necessary means without limitations to the information provided by the project proponent;

II. Remote interviews with project stakeholders

- Interviews with relevant stakeholders in host country with personnel having knowledge with the project development via telephone, email or direct on-site visits;
- Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent;

III. Reference to available information relating to projects or technologies similar to project under validation and review based on the approved methodology being applied for the appropriateness of formulae and accuracy of calculations.

IV. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The number of findings raised during validation

During the course of validation, a total of 13 findings were raised, which include:

06 Corrective Action Requests (CARs);

07 Clarification Requests (CLs);

00 Forward Action requests (FARs).

All the raised findings have been successfully closed by the Project Proponent.

Any uncertainties associated with the validation

There are no uncertainties associated with the validation of the project activity. The validation has been done with a reasonable level of assurance.

Summary of the validation conclusion

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the VCS Grouped Project "Recipe for Change Grouped Project" along with Project instance 1, in the Republic of South Africa, as described in the PD (version 3.0, dated 06/05/2021) /01-3/, meets all applicable VCS requirements, including those specified in the VCS Standard (v4.0, dated 19/09/2019), relevant methodologies, tools and guidelines.

The selected baseline and monitoring methodologies (AMS-II C and AMS-II G) are applicable to the project and correctly applied. Carbon Check (India) Private Ltd. therefore requests the registration of the project as a VCS grouped project.

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1 INTRODUCTION

1.1 Objective

Wonderbag UK Limited has commissioned the VVB, Carbon Check (India) Private Ltd. to perform a validation of the VCS Grouped Project “Recipe for Change Grouped Project” and Project 1, located throughout Republic of South Africa (hereafter referred to as “project activity”). This report summarizes the findings of validation of the project, performed on the basis of the VCS Program Guide (v4.0, dated 19/09/2019), VCS Standard (v4.0, dated 19/09/2019), Program Definitions (v4.0, dated 19/09/2019), Registration & Issuance Process (v4.0, dated 19/09/2019), VCS Validation and Verification Manual (v 3.2, dated 19/10/2016). Validation is required for all VCS project activities intending to register a grouped project under the VCS program. This report contains the findings and resolutions from the validation of the grouped project.

The purpose of a validation is to have a thorough and independent assessment of the proposed grouped project against the applicable VCS requirements, in particular, the project's baseline, monitoring plan and the project's compliance with relevant VCS and host Party criteria. These are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions, VCU's.

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the Project Description (PD), project design, the project's baseline study and monitoring plan and other relevant documents. The PD is reviewed against the relevant criteria and decisions by the VCS Program, and against the approved baseline and monitoring methodology. Carbon Check has employed a risk-based approach in the validation, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

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

- VCS Program Guide (v4.0, dated 19/09/2019)
- VCS Standard (v4.0, dated 19/09/2019)

- Program Definitions (v4.0, dated 19/09/2019)
- Registration & Issuance Process (v4.0, dated 19/09/2019)
- VCS Validation and Verification Manual (v 3.2, dated 19/10/2016)
- CDM Methodology: AMS-II.C.: Demand-side energy efficiency activities for specific technologies” (Version 15.0) and AMS-II.G Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1)
- Other relevant rules, including the host country legislation

1.3 Level of Assurance

☒ Reasonable level of assurance

☐ Limited level of assurance

1.4 Summary Description of the Project

The project “Recipe for Change Grouped Project” is a grouped project which employs two different small scale baseline and monitoring methodologies; AMS-II.C. version 15 (B02-a) and AMS-II.G. version 11.1 (B02-b). The grouped project involves distribution of Heat retention cooking device in kitchens throughout Republic of South Africa. This grouped project comprises of various project activity instances (RFC PA) and each project activity instance will distribute around 20,000 Wonderbags. The project reduces amount of fossil fuels, electricity and nonrenewable biomass used for cooking. The start date for the grouped project and first project activity instance (RFC PA 1) is 15/03/2019 which is the date on which Wonderbag was distributed to households. .

The project proponent for the project activity is Wonderbag UK Limited.

The total estimated GHG emission reductions expected from the Project 1 are 144,755 tCO₂e for the seven years renewable crediting period and average of 20,679 tCO₂e/year.

2 VALIDATION PROCESS

2.1 Method and Criteria

Wonderbag UK Limited has commissioned the VVB, Carbon Check (India) Private Ltd., to carry out the validation of the project “Recipe for Change Grouped Project” along with Project 1, with regards to the relevant requirements of VCS Standard Version 4.0 (dated 19/09/2019)/B01-a).

The validation includes a thorough and independent assessment of the proposed grouped project against the applicable VCS requirements, in particular, the project's baseline, additionality, monitoring plan and the project's compliance with relevant VCS and host Party criteria. The validation involves assessment of the project and to confirm that the project meets the applicability conditions of the selected baseline and monitoring methodologies, AMS-II.C. version 15 (B02-a) and AMS-II.G. version 11.1 (B02-b) and also assess the claims and assumptions made in the PD /01-03/ without limitation on the information provided by the project participants. The overall validation was conducted using Carbon Check's internal procedures.

2.2 Document Review

During the document review, CCIPL has applied standard auditing techniques including but not limited to document reviews, remote interviews, and stakeholder interviews, review of the applicable/applied methodologies and its underlying formulae and calculations to assess the quality of information provided.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed grouped project thus confirming the project design as document is sound and reasonable and meets the stated requirements and identified criteria.

The VCS project description, emission reduction calculation spread sheet and supporting documents related to the project design and baseline were reviewed as per VCS standard version 04 /B01/ requirements. The desk review included:

- A review of the data and information presented to verify completeness and consistency in accordance with VCS standard version 04 requirements;
- A review of the project description and monitoring methodology, paying particular attention to the applicability conditions of the methodology and baseline and additionality related requirements.
- A review of the monitoring plan and the project's compliance with relevant VCS criteria.

Furthermore, the validation team used additional documentation by third parties like host-party legislation, technical reports referring to the project design or to the basic conditions and technical data.

The VCS PD version 01 dated 22/01/2021 /01-1/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents. The documents reviewed by CCIPL are listed below in Appendix 1. Through the process of the validation, the revised VCS PD and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the validation team.

The table in Appendix 1 outlines the documentation reviewed during the validation.

2.3 Interviews

The table below describes the remote interview process and further identifies personnel, including their roles, who were interviewed and/or provided information additional to that provided in the project description /01/ and any supporting documents.

	Date	Name	Organisation	Topic
/1/	19/02/2021 and 20/02/2021	Sarah Collins	Wonderbag UK Limited	• Project Design • Project Implementation status • Project start date and Project Location • Baseline Scenario • Baseline Identification and Additionality • Qualification and Training • Monitoring and reporting documentation • Quality Assurance – Management and operating system • Social and Environmental Impacts • Local Stakeholders meeting process • Compliance with relevant laws • Roles and responsibility
/2/	19/02/2021 and 20/02/2021	Olivia Tuchten	Promethium Carbon	• Project Design • Project Implementation status • Monitoring and operating system • Quantification of emission reductions • Baseline identification, Monitoring and additionality • Methodology applicability • Project background information and VCU consideration • Local Stakeholders meeting process • Monitoring parameters

				• Roles and responsibility
/3/	19/02/2021 and 20/02/2021	Kenneth Slabbert	Promethium Carbon	• Project background information • Project design • Monitoring and operating system • Quantification of emission reductions
/4/	19/02/2021 and 20/02/2021	Sathiesh Govender	GRG Analytix (Pty) Ltd	Baseline survey and sampling procedures
/5/	19/02/2021 and 20/02/2021	Goodwill	GRG Analytix (Pty) Ltd	Baseline survey and sampling procedures
/6/	19/02/2021	Devanna	GRG Analytix (Pty) Ltd	Baseline survey and sampling procedures
/7/	19/02/2021	Fadia	GRG Analytix (Pty) Ltd	Baseline survey and sampling procedures
/8/	01/03/2021	Mrs Angie Narayanan (Fund Raising and PR Manager) (KwaZulu Natal (Pietermaritzburg))	Local Stakeholders (Community Chest Pietermaritzburg)	Discussion on the project implementation, stakeholder contribution, data collection and distribution
/9/	01/03/2021	Mrs Fahmieda Barends (Western Cape)	Local Stakeholders (Cooking Bag Revolution (Pty) Ltd)	Discussion on the project implementation, stakeholder contribution, data collection and distribution
/10/	01/03/2021	Mrs Jabu Mthembu-Dlamini (Mpumalanga)	Local Stakeholders (Do More Foundation Trust)	Discussion on the project implementation, stakeholder contribution, data collection and distribution
/11/	01/03/2021	Dr Carolyn Hancock (Kwa Zulu Natal (Howick))	Local Stakeholders (Angel's Care Crisis Centre and Thembelihle Primary School.)	Discussion on the project implementation, stakeholder contribution, data collection and distribution
/12/	01/03/2021	Alice Kramer (Western Cape)	Local Stakeholders (Governor Hout Bay High School and Manager, Information	Discussion on the project implementation, stakeholder contribution, data collection and distribution

			Technology Business at Woolworths	
/13/	01/03/2021	Mrs Janna Strang	(Local Stakeholders) Maqwaveni Informal Settlement	Discussion on the project implementation, stakeholder contribution, data collection and distribution

2.4 Site Inspections

Carbon Check has not conducted an on-site inspection due to the recent pandemic COVID19 and due to its related policy measures created restrictions all over the world impacting travel activities on an international level and even for in-country travel. A reasonable level of assurance has been maintained through the alternative means used for the purpose of validation as follows:

- An assessment of the implementation and operation of the proposed grouped project through remote interviews with the representatives of project proponent.
- Confirmation of the pre-project scenario
- Confirmation of the applicability of the methodologies and monitoring and controlling instruments and operational arrangements.
- Assessment of the project boundaries
- Assessment of the monitoring provisions by checking the monitoring arrangement.

In line with paragraph 26 of the Sampling Standard, the validation team has applied acceptance sampling approach through remote interviews on the Wonderbag baseline habit survey as part of validation. The project participant had applied sampling approach to determine the baseline, a representative Baseline habit survey /12/ was conducted by the representatives of Project participant. The validation team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B04/.

Applying paragraph 39 (c) of the sampling standard, version 08 /B07/, a sample size of 18 households was chosen (with no discrepant records). A sample size of 18 was determined, based on an AQL of 1.0% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number (c) thus determined for the sample is 1. However, DOE interviewed 22 samples from the baseline survey done by project participants.

The information provided in the baseline habit survey /12/, has been cross checked during the remote interviews conducted. As a part of acceptance sampling, the Validation team could confirm the baseline habit survey data /12/ with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 08 /B04/.

2.5 Resolution of Findings

This section summarises the findings from the validation of the project activity. In this section the findings from the document review, assessments and remote interviews are provided.

Material discrepancies identified in the course of the validation are addressed either as CARs, CLs or FARs.

Corrective action requests (CAR) are issued, where:

- i. mistakes have been made with a direct influence on project results requiring adjustments of the VERs/VCUs monitoring report;
- ii. applicable methodological specific requirements have not been met.

A **Clarification request (CL)** may be used where additional information is needed to fully clarify an issue or where the information is not transparent enough to establish whether a requirement is met.

A **forward action request (FAR)** should be issued, where:

- i. the actual project monitoring and reporting practices requires attention and /or adjustment for the consecutive verification period, or
- ii. an adjustment of the MP is recommended.

In the context of FARs, risks have been identified, which may endanger the delivery of high quality emissions reductions in the future, i.e. by deviations from standard procedures as defined by the MP. As a consequence, such aspects should receive a special focus during the consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions.

A total of 06 CARs, and 07 CLs had been raised and successfully closed. Please refer to Appendix 4 below for the details of the CARs/CLs and their closure.

3 VALIDATION FINDINGS

3.1 Project Details

The project “Recipe for Change Grouped Project” is a grouped project in which it consists of various Project Activity Instances which employs two different small scale baseline and monitoring methodologies; AMS-II.C. version 15 (B02-a) and AMS-II.G. version 11.1 (B02-b). The grouped project involves distribution of Heat retention cooking device in kitchens throughout Republic of South Africa. This grouped project comprises of various project activity instances (RFC PA) and each project activity instance will distribute around 20,000 Wonderbags. The project results in reducing the amount of fossil

fuels, electricity and non renewable biomass used for cooking. Through reduction in fossil fuel / biomass / electricity consumption, the programme will decrease greenhouse gas emissions. To achieve this, the programme promotes wide-spread use of a heat-retention device “Wonderbag”. This is a thermally insulated bag into which a cook transfers a pot heated on a stove. The food in the pot continues to cook, while the stove is no longer in use, so conserving fossil fuels, electricity and non renewable biomass. Section 1.1. of the VCS PD contains a clear summary description of the projects. The completeness and accuracy of the project description was validated through remote interviews. During the remote interviews it revealed that along with Wonderbag there will be Wonderbag recipe book provided to the end users. This Wonderbag recipe book ensures that carbon credit generated from the project solutions would belong to Wonderbag UK Limited. In general, manufacturer provides a minimum of three year warranty to the users.

The project proponent is Wonderbag UK Limited which will be holding the carbon credits generated from the project activity.

The start date for the grouped project is 15 March 2019, when the Wonderbags series got activated under Maqwavani Informal Settlement in Kwa Zulu Natal /13/. The start date is in accordance with paragraph 3.8.2 of the VCS Standard, in that the project is expected to complete validation under the VCS within two years of the project start date. In relation to the requirements set in the VCS Standard paragraph 3.12.8. CDM approved baseline and monitoring methodologies have been applied by the project.

The crediting period starts on 15 March 2019/13/, which coincides with the starting date of the project activity, and lasts for 7 years, renewable twice. This is in accordance with paragraph 3.8.1 of the VCS standard for non-AFOLU projects.

The indication of the project activity instance location and the geographic boundaries is provided in section 1.12. of the VCS PD. They are in accordance with paragraph 3.10.1 of the VCS Standard and can confirm that the project activity instance boundary is uniquely defined. The grouped project and project activity instance location and geographic boundaries of the project are those of the Republic of South Africa. This is in accordance with paragraph 3.5.8 of the VCS standard version 4.0 /B01-a/, which requires grouped projects to have one or more clearly defined geographic areas within which new project activity instances may be developed.

The VCS PD clearly indicates the project scope, which is scope 3: Energy demand, and more specifically demand -side energy efficiency project. The project is a grouped project and the project activity instance, this is indicated in section 1.2. of the VCS PD.

The proposed grouped project and project activity instance is an energy efficiency project activity and is located in a non-Annex I country. Therefore, the ER generated would not be part of an emission trading program, nor it is located in a jurisdiction or sector with binding limits. The project proponent intends to claim carbon credits under the VCS programme only for the emission reductions achieved. The PP states in the VCS PD that the emission reductions generated by this project will not be used for compliance with an emission-trading program or to fulfil binding commitments. In fact, at the time of validation, no binding targets have been set by South Africa under the Kyoto protocol, as indicated in the UNFCCC website/B06/.

The project proponent has declared that the project is not in registration under any other GHG program. The validation team has checked the UNFCCC database of registered projects or projects under validation and was able to confirm that the listed projects are not the proposed project activity.

The proposed project activity instances do not generate another form of environmental credit. The project proponent indicates in the VCS PD that the project does not intend to generate any other form of GHG related environmental credit other than those claimed under this VCS project.

The project participants made earlier attempt to register the project as a CDM PoA resulted in a rejection due to various deficits related to determination of baseline emission and the monitoring plan design and for this reason the CDM programme was abandoned. The conditions set under paragraph 3.19.7 of the VCS Standard version 4.0 have been assessed as follows:

- The project description clearly states all GHG programmes to which the project has applied for registration and provides clear reference to the official document listing the reasons for the rejection. This information is not considered as commercially sensitive;
- CCIPL was provided with the rejection document;
- The project is validated against the VCS rules. The validation team has assessed that the reasons for the rejection from the GHG programme.

The project activity instance does not change the baseline stoves when the Wonderbag is introduced, the only applicable laws and regulations are those related to basic conditions of Employment. The National Environmental Management: Biodiversity Act (No. 10) 2004 do not include any activity like Environmental Impact Assessment related to Wonderbag.

Wonderbag reduces fossil fuel consumption and emissions savings but also has many other benefits for the household. It contributes to sustainable development in Republic of South Africa through:

- Reducing deforestation due to efficient fuel usage that occurs when using the Wonderbag.
- Increase in disposable income due to reduced spending on fuels.
- It helps stimulate economic empowerment by creating jobs and entrepreneurs in manufacturing and selling of Wonderbags.
- Time savings for the person cooking: this is a highly valued benefit for the household as cooks now add productive time to their working day. This facilitates schooling for girls, who are often made responsible for cooking activities.
- Gender balance: as the persons cooking in the household are mainly women, their earning potential, confidence and general position strengthens. In addition, reduced time spent by women collecting firewood has been shown to lower the incidence of rape.
- Improved health: cooking with a Wonderbag reduces indoor air pollution and helps reduce burn injuries and death, especially those caused by paraffin cookstoves.
- Improved food utilization: cooking in a Wonderbag prevents food being burnt meaning reduced food wastage.

Eligibility criteria of the grouped project activity

The eligibility criteria have been provided clearly in section 1.4 of the PD /01/ and then justification provided for inclusion of project instances for the two methodologies.

Sl. No.	Eligibility criteria for the inclusion of new project activity instances	Method of Evaluation	Applicability	Assessment by the validation team
1.	Geographical boundaries: all new project activity instances must be located within the boundary of the Republic of South Africa.	Demonstrate that the Wonderbags are distributed within the boundaries of the Republic of South Africa. For example, provide database records.	Wonderbags have currently been distributed in the KwaZulu Natal province of South Africa, as per the database records. Future Wonderbags will be distributed across South Africa, as required.	The validation team reviewed the sample distributed records for new project activity instances spreadsheet/03/ and by further conducting remote interviews with representatives of PP to confirm that all new project activity instances are located within the geographical area identified in the registered VCS PD/01/. All new project activity instances are located within the host country republic of south Africa. This is deemed appropriate to the Validation team. Thus, the requirements of this key elements have been met all the new project activity instances added to the grouped project.
2.	Comply with at least one complete set of	New Project Activity Instances must comply	RFC PA 1 complies with the full set of	The validation team has found the

	eligibility criteria for the inclusion of new project activity instances. Partial compliance with multiple sets of eligibility criteria is insufficient.	with the full set of eligibility criteria for the inclusion of new project activity instances in this table.	applicable eligibility criteria for the inclusion of new project activity instances in this table and in the table above.	eligibility criteria for project activity instances has been met, which is mentioned under section 1.4 of the PD. This is deemed appropriate to the Validation team
3.	Be included in the monitoring report with sufficient technical, financial, geographic and other relevant information to demonstrate compliance with the applicable set of eligibility criteria and enable sampling by the validation/verification body.	New Project Activity Instances must comprise monitoring plans that outline the technical, financial, geographic and other relevant information to enable sampling by the validation/verification body.	RFC PA 1 comprises a monitoring plan that outlines the technical, financial, geographic and other relevant information to enable sampling by the validation/verification body.	The validation team has adopted the acceptance sampling to cross the check the baseline Habit survey. This is deemed appropriate to the Validation team
4.	Be validated at the time of verification against the applicable set of eligibility criteria.	New Project Activity Instances must be validated at the time of verification against the applicable set of eligibility criteria.	RFC PA 1 will be validated at the time of verification against the applicable set of eligibility criteria.	As per the eligibility criteria state in the VCS standard version 4 the project activity instance will be validated at the time of verification against the applicable set of eligibility criteria deemed appropriate to the Validation team.
5.	Have evidence of project ownership, in respect of each project activity instance, held by the project	New Project Activity Instances must demonstrate ownership by the project participant, from the	RFC PA 1 is owned by Wonderbag UK Limited. Wonderbags are	Validation team have reviewed the evidences as state under this eligibility criteria.

	proponent from the respective start date of each project activity instance (i.e., the date upon which the project activity instance began reducing or removing GHG emissions).	start date of the project activity instance.	trade-marked devices. Ownership is outlined further in section 1.7 of this project description.	This is deemed appropriate to the Validation team.
6.	Have a start date that is the same as or later than the grouped project start date. The start date of new project activity instances must be after the start date of the grouped project: 15 March 2019.	New Project Activity Instances must provide evidence that only bags distributed into the field after the Group Project start date are accounted for. For example, provide database records of distributed bags.	The bags employed in RFC PA 1 the first project instances have all been distributed into the field after from the Group Project start date of 15 March 2019, as per the section 1.8 of this Project Description.	The validation team reviewed the evidence provided for the group project start date of 15 th March 2019/13/. This is deemed appropriate to the validation team. Thus, the eligibility criteria have been for met the new project activity instances added to the grouped project.
7.	Be eligible for crediting from the start date of the instance through to the end of the project crediting period (only).	New Project Activity Instances must be eligible for crediting from the start date of the instance through to the end of the project crediting period (only).	RFC PA 1 is eligible for crediting from the start date of the instance, 15 March 2019 through to the end of the project crediting period (only), 14 March 2026. Evidence of this is the database records that indicate that the first Wonderbags under RFC PA 1 were	The validation team reviewed the evidence provided for the group project start date of 15 th March 2019/13/ and the master database/03/. This is deemed appropriate to the validation team. Thus, the eligibility criteria has been met for the new project activity instances added to the grouped project.

			distributed on 15 March 2019.	
8.	Where inclusion of a new project activity instance necessitates the addition of a new project proponent to the project, such instances shall be included in the grouped project within two years of the project activity instance start date	The addition of a new project proponent to Project Activity Instances shall be included in the grouped project within two years of the project activity instance start date.	Not applicable to RFC PA 1 as the only project proponent in Wonderbag UK Limited.	Validation team reviewed the PD and the all the relevant documents which states that Wonderbag UK Limited is only the project proponent till date. Hence, the eligibility criteria are not applicable to the new project activity instances added to the grouped project.

3.2 Safeguards

3.2.1 No Net Harm

As identified by PP project has no negative impact. The potential negative environmental and socio-economic impacts identified by the project proponent and have been listed in section 2.1 of the PD.

Every additional project activity instance to be added to this Grouped Project will summarize any potential negative environmental and socio-economic impacts and the steps taken to mitigate them.

The validation team confirms that for Project 1, the project does not pose any potential negative environmental and socio-economic impacts. A local stakeholders meeting was conducted for the project and there was no negative feedback.

3.2.2 Local Stakeholder Consultation

The stakeholder consultation meeting was held on multiple occasions in different provinces of Republic of South Africa which are listed below;

1. Planting Hope Foundation:
Location: Pietermaritzburg, KwaZulu Natal.
Date: 28 July 2020.
2. Sizasimeni Creche:
Location: Snathing Location, KwaZulu Natal.

Date: 28 August 2020.

3. Letcee:

Location: Greytown, KwaZulu Natal.

Date: 6 August 2020.

4. Cancer Support Group:

Location: Overport Durban, KwaZulu Natal.

Date: 6 August 2020.

5. Thandanani Children's Foundation

Location: Pietermaritzburg, KwaZulu Natal.

Date: 29 June 2020.

6. Kalinka:

Location: Pietermaritzburg, KwaZulu Natal.

Date: 1 July 2020.

7. Open Door Crisis Centre:

Location: Pinetown, KwaZulu Natal.

Date: 31 July 2020.

8. Molweni Zime Centre:

Location: Molweni Valley 1000 Hills, KwaZulu Natal.

Date: 27 August 2020.

9. Red Cross Pietermaritzburg:

Location: Pietermaritzburg, KwaZulu Natal.

Date: 12 August 2020.

10. Dlananathi:

Location: Pietermaritzburg, KwaZulu Natal.

Date: 7 July 2020.

11. Constantia CAN:

Location: Constantia and Khayelitsha site B, Western Cape.

Date: 13 May 2020 and 28 May 2020.

12. Kommetjie CAN/Ocean View:

Location: Living Hope, Capri and Ocean View, Western Cape.

Date: 14 May 2020 and 26 May 2020.

13. Living Hope:

Location: Living Hope, Capri, Western Cape.

Date: 12 activations over May & June 2020.

14. Clovelly CAN:

Location: Living Hope, Capri, Western Cape.

Date: 28 April 2020.

15. PayGas – WC:

Location: Delft, Western Cape.

Date: 28 May 2020.

16. Pure Good:

Location: Windfield Military Air Base, Western Cape.

Date: 1 June 2020.

17. This is Progress:

Location: Salt River, Western Cape.

Date: 14 August 2020.

18. Ward 67 – Gerry:

Location: Pelikan heights, Western Cape.

Date: 18 August 2020.

19. Ladles of Love/ Den Anker:

Location: Den Anker, Waterfront, Western Cape.

Date: 11 September 2020.

20. Do More Foundation:

Location: Worcester, Western Cape.

Date: 12 August 2020.

21. Uphawu Community / Philippi:

Location: Grounds Farm, Philippi, Western Cape.

Date: 10 August 2020.

The key comments made by the local stakeholders were all answered during the local stakeholder consultation meetings and have also been provided in the section of 2.2 the PD /01-3/. The stakeholder meeting conducted by the PP have been listed in the section 2.2 of the PD /01-3/ summary of the local stakeholder participation has been provided. The summary of the comments received during the local stakeholder consultation has also been provided in the section 2.2 of the VCS PD/01-3/. The local stakeholder consultation meetings with the list of participants have been provided to the validation team/10/.

Validation team through remote interviews with local stakeholders as mentioned in section 2.3 of this validation report confirms that the local stakeholder consultation conducted meets the requirements as provided.

The validation team confirms on the procedure and method for engagement, method for documenting the outcomes of local stakeholders consultation and account of all inputs received. The validation team confirms that the project proponent has taken due account of all input (no negative comments were received for the project). Hence the validation team deemed the local stakeholders meeting procedure including the inputs received as appropriate.

3.2.3 Environmental Impact

As per the need for an EIA, Environmental Impact Assessments in South Africa are regulated through the National Environmental Management Act (NEMA). Such activities are listed in three listing notices published as integrations to the NEMA. CCIPL checked the activities included and can confirm that the activity implemented by the proposed grouped project is not included. Therefore, the proposed grouped project does not require an environmental impact assessment according to the environmental regulation of the host country. This was confirmed by the validation team during the remote interview. No environmental impacts have been identified by the project proponent. In fact, the insulation material of the Wonderbags is made of recycled materials: the bags are made out of recycled polyester, poly-cotton and materials. The newer version of the Wonderbag is made out of recycled chipfoam (waste) from local manufactures. Natural Balance will also keep a list of locations where polystyrene can be recycled to communicate it to the users.

3.2.4 Public Comments

The public commenting period for the project was from 03/02/2021 to 05/03/2021. No public comments were received for the grouped project.

3.2.5 AFOLU-Specific Safeguards

Not Applicable.

3.3 Application of Methodology

3.3.1 Title and Reference

The Grouped Project provides for projects that use one or both of the following two UNFCCC approved small-scale methodologies:

- AMS-II.C. “Demand-side energy efficiency activities for specific technologies” (Version 15.0)
- AMS-II.G. “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1)

The associated tools and guideline documents in the Grouped Project include:

- CDM TOOL21 “Demonstration of additionality of small-scale project activities” Version 13.1
- CDM TOOL30 “Calculation of the fraction of non-renewable biomass” Version 03.0
- CDM Guideline “Sampling and surveys of CDM project activities and programmes of activities” version 04.0
- CDM Standard “Sampling and surveys for CDM project activities and programmes of activities” version 08.0
- CDM TOOL01 “Tool for the demonstration and assessment of additionality” Version 07.0.0;

3.3.2 Applicability

The project applies two different small scale methodologies; AMS-II.C, version 15.0/B02-a/ and AMS-II.G version 11.1 /B02-b/. Applicability criteria for the baseline line methodologies are assessed by the validation team by means of document review and interview. Validation team confirms that the project activity meets the criteria of the applied methodologies.

For project instances under methodology AMS-II.C:

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
1	This methodology is only applicable if the service level (e.g. rated capacity or output) of the installed, project energy-efficient equipment is between 90% and 150% of the service level of the baseline equipment. Examples of service levels are light output for lighting equipment, water output and temperature for water heating systems, and rated thermal output capacity of air conditioners. The relationship of the service level of the project energy-efficient equipment to the baseline equipment can be one to one replacement (e.g. replacement of inefficient refrigerator with new and efficient refrigerator) or many-to-one (e.g. replacement of small multiple chillers with a central chiller plant). In the latter case, the service	Complies. The service levels of both the Wonderbags and stoves are the cooking of food. The service levels of the installed heat-retaining Wonderbags is 100% of the service level of the stoves used to cook a household's food (i.e. baseline equipment). The relationship of the service level of the Wonderbags to the stoves can be a one-to-one replacement, for example where a Wonderbag replaces the use of a single stove plate. An example of this scenario is the typical paraffin or LPG burners used to cook food, which consists of a single plate, upon which a pot/pan is used to cook food. The relationship of the service level of the Wonderbags to the stoves can also be many-to-one, for example where multiple Wonderbags are installed. In the latter case, the	The validation team reviewed the VCS PD/01/ and further, based on remote interviews the representatives of PP and end users of technology confirms that project instances under AMS-II.C (version 15)/B02-a/ will save electricity or fossil fuel. Prior to the project activity the end users were using fossil fuel or electricity for the cooking purpose. Thus, the project instances under this methodology will reduce the usage of fossil fuel or electricity used for cooking purposes.

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
	level of the project and baseline can be compared on an aggregate basis.	service level of the project and baseline is compared on an aggregate basis.	
2	In the event that project output in year y is greater than the average historical output (average of the three most recent years prior to the project implementation ¹) and the demonstration of the baseline for the incremental capacity is not undertaken, the value of the output in year y is capped at the value of the historical average output level.	Complies. The output (use of the Wonderbags to cook food) will not increase because the meals per adult equivalent will not increase due to the project activities and therefore the fuels used to cook said meals will not increase.	As the introduction wonderbag do not affect the diet of the users. Hence this met applicability criteria.
3	If the energy-efficient equipment contains refrigerants, then the refrigerant used in the project case shall have no ozone depleting potential (ODP).	Not applicable: the Wonderbag does not make use of any refrigerants.	The Validation team has reviewed technical specification/06/ of the wonderbag provided by the project proponent, the project activity does not involve refrigerants. Hence, this eligibility criteria is not applicable.
4	This methodology credits emission reductions only due to the reduction in electricity and/or fossil fuel consumption from use of more efficient equipment. However, the calculation of project emissions shall include any incremental	Not applicable: the Wonderbag does not make use of any refrigerants.	The Validation team has reviewed technical specification/06/ of the wonderbag provided by the project proponent, the project activity does not involve refrigerants. Hence, this eligibility criteria is not applicable.

¹ A maximum of +10% variation is permitted.

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
	emissions, as compared to the baseline, associated with refrigerants used in the project equipment.		
5	The aggregate energy savings by a single project may not exceed the equivalent of 60GWh per year for electricity end-use energy efficiency technologies. For fossil fuel end-use energy efficiency technologies, the limit is 180 GWh thermal per year in fuel input.	Complies. A single Wonderbag is estimated to save approximately 0.001TJ, 0.0001TJ and 0.00013TJ for coal, LPG and paraffin respectively. A single project activity instance of 20,000 Wonderbags would therefore save 20TJ, 2TJ and 2.6TJ respectively. All of these fall below the threshold of 180GWh thermal converted to 648TJ. In the case of electricity, a single Wonderbag is estimated to save 0.0002 GWh. A single project activity instance of 20,000 Wonderbags therefore saves 4GWh which falls below the threshold of 60GWh	The validation team confirms that all new project activity instances comply with the requirements of the capacity limits as defined in the eligibility criteria. All new project activity instances will have a capacity below 1% of the applicability small-scale capacity limit. Specifically, it is confirmed that: PP has submitted electricity consumption per households references in South Africa in 2014 showing that the average electricity consumption per household in South Africa is 0.0002 GWh per year. Therefore, savings for the 20,000 wonderbags calculated to be 4 GWh resulting from the adoption of a Wonderbag by users do not exceed the 60 GWh. In case of biomass saving calculated for 20,000 wonderbags for project activity instance is 0.0210 TJ resulting from the adoption of a Wonderbag by users do not exceed the 180 GWh thermal limit. Based on the above assessment the validation

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
			team concludes that the requirements of the eligibility criteria have been successfully met by new project activity instances added under the grouped project.

For project instances under methodology AMS-II.G

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
1	The aggregated energy savings of a single project activity shall not exceed the equivalent of 60GWh per year or 180GWh thermal per year in fuel input.	Complies. Each project activity instance will be limited to a maximum of 20,000 Wonderbags in order to remain below this threshold. A single Wonderbag is estimated to save 0.020TJ and the 180GWh thermal is equivalent to 648TJ. A single project activity instance of 20,000 Wonderbags would therefore save approximately 400TJ.	The validation team confirms that all new project activity instances comply with the requirements of the capacity limits as defined in the eligibility criteria. All new project activity instances will have a capacity below 1% of the applicability small-scale capacity limit. Specifically, it is confirmed that: As per project activity instance biomass savings per wonderbags is taken to be 0.0210 TJ which is the deduction of biomass used without wonderbag and biomass used with wonderbag and this is equivalent to 648 TJ TJ of biomass. Therefore, savings resulting from the adoption of a Wonderbag by users do not exceed the 180 GWh thermal limit. For electricity consumption per households references in

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
			South Africa in 2014 showing that the average electricity consumption per household in South Africa is 0.0002 GWh per year. Therefore, savings for the 20,000 wonderbags calculated to be 4 GWh resulting from the adoption of a Wonderbag by users do not exceed the 60 GWh. Based on the above assessment the validation team concludes that the requirements of the eligibility criteria have been successfully met by new project activity instances added under the grouped project.
2	Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	Complies. The annual trend for natural forest in South Africa shows a decrease since 1990.	The validation team have reviewed the published “South Africa Forest information and data” and thus found that the requirements of the eligibility criteria have been successfully met by project activity.
3	For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology.	Not applicable. Only non-renewable biomass is considered in this project.	Validation team thought remote interviews with the users identifies that only woody biomass is used. Hence, this eligibility criteria is not applicable.
4	If the project device requires a specific fuel for this device (e.g. briquettes, pellets, woodchips), the consumption of the fuel	Complies. The Wonderbag does not require a specific fuel. It is used in conjunction with the existing cooking system. The consumption of the fuel used will be monitored through	The Validation teams during the remote interviews and document review found that the wonderbag will be used in aggregation with the baseline stoves.

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of validation
	should be monitored during the crediting period.	surveys during the crediting period.	Thus, the validation team concludes that the requirements of the eligibility criteria have been successfully met by the project activity.
5	The project description shall explain the proposed method for distribution of project devices including the method to avoid double counting of emission reductions such as unique identifications of product and end-user locations.	Complies. The method of distribution of Wonderbags is described in Section 1.11. Each Wonderbag is issued with a unique ID which avoids double counting.	As per the section 1.11 of the PD, which states that the wonderbag distributed under this project activity has a unique ID and will be recorded during the distribution process. Thus, the validation team concludes that the requirements of the eligibility criteria have been successfully met by the project activity.
6	The project description shall explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.	Wonderbag UK Ltd is the only manufacturer of the Wonderbag and keeps records of all manufactured Wonderbags using a unique ID for each bag. A distribution agreement is signed by all distribution partners stating that they will not claim any emission reductions from the distributed Wonderbags.	Validation team has reviewed the distribution agreement which states that Wonderbag UK Limited will only be the project participant to claim the emission reduction obtained from this project activity instance. The validation team concludes that the requirements of the eligibility criteria have been successfully met by the project activity.

TOOL21 “Demonstration of additionality of small-scale project activities” applicability criteria

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of Validation
1	The use of the “Demonstration of additionality of small-scale project activities” is not mandatory for project participants when	Not applicable. The project does not propose a new methodology.	The validation team through document review and remote interviews check that the project

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of Validation
	proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.		activity does not use the new methodology to Demonstrate the small scale additionality. Hence this criteria is not applicable.
2	Project participants and coordinating/managing entities may also apply "TOOL19: Demonstration of additionality of microscale project activities" as applicable.	Not applicable. Additionality is proven using the investment barrier analysis as per paragraph 10(a) of the TOOL21. The assessment is undertaken in the following section 3.5 of this project description.	As the project activity uses the Tool 21 to demonstrate the additionality through investment barrier. Hence this criteria is not applicable.

TOOL30 "Calculation of the fraction of non-renewable biomass" applicability criteria

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of Validation
1	This tool may be used by: (a) DNAs to submit region/country-specific default fNRB values, following the procedures for development, revision, clarification and update of standardized baselines (SB procedures); or (b) (b) project proponents to calculate project or PoA-specific fNRB values.	Complies. This tool was used by the project participants to calculate a project specific value for fNRB under option (b) of applicability condition 1.	The validation team has reviewed the fNRB calculator spread sheet, which complies with the requirements provided in the Tool 30. Thus, the validation team concludes that the requirements of the eligibility criteria have been successfully met by the project activity.
2	For project or PoA specific fNRB values, project proponents shall assess the area where biomass is sourced and justify the selection of the area in CDM project design documents.	Complies. The area for the calculated value was selected to coincide with the Grouped Project's project boundary.	The validation team has reviewed the fNRB calculator spread sheet, which complies with the requirements provided in the Tool 30.

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of Validation
			Thus, the validation team concludes that the requirements of the eligibility criteria have been successfully met by the project activity.

ASB0040-2018 “Standardized baseline: Grid emission factor for Southern African Power Pool” applicability criteria

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of Validation
1	Clean development mechanism (CDM) project activities and programmes of activities (hereinafter referred as project activities) can apply this standardized baseline under the following conditions: (a) The project activity is implemented in any one of following countries, which are the SAPP member countries, and is connected to the SAPP; (i) Republic of Botswana; (ii) Democratic Republic of Congo; (iii) Kingdom of Lesotho; (iv) Republic of Mozambique; (v) Republic of Namibia; (vi) Republic of South Africa; (vii) Kingdom of Swaziland; (viii) Republic of Zambia, and (ix) Republic of Zimbabwe. (b) The CDM approved methodology that is applied to the	Complies. The project activity falls within the Republic of South Africa. The methodology requires the use of the grid tool to determine the CO₂ emission factor. The ex-ante options are used in the grid tool therefore no recalculation is required for the emission factor during the crediting period.	The validation team reviewed the Emission reduction spreadsheet, which uses the value of 0.9481 tCO₂/MWh grid emission factor. The project activity is in Republic of south Africa and hence this connected to SAPP, Hence the ex-ante options as described in grid tool requires no recalculation. Thus, the validation team concludes that the criteria have been successfully met by the project activity.

No.	Relevant applicability condition	Compliance at RFC PA 1	Means of Validation
	project activity requires the determination of CO2 emission factor(s) through the application of the grid tool; (c) The project activity uses the ex-ante options for both the operating margin and build margin grid emissions factors, as described in the grid tool, and therefore no monitoring or recalculation of the emission factor during the crediting period is required.		
2	The latest approved and valid values of this standardized baseline are the only values of the CO2 emission factor(s) that shall be applied for the project electricity system in the SAPP member countries listed under sub-para 3(a) above.	Complies. The project activity only applies the value from the approved standardized baseline.	The validation reviewed the Emission reduction spreadsheet , which uses the value of grid emission factor. Thus, the validation team concludes that the criteria have been successfully met by the project activity.

3.3.3 Project Boundary

The Grouped Project boundary is defined as per AMS-II.C. “Demand-side energy efficiency activities for specific technologies” and AMS-II.G. “Energy efficiency measures in thermal applications of non-renewable biomass”.

The sources of greenhouse gas identified in the PD/01-3/ are deemed to be appropriate and assessed below:

The project boundary for the Grouped Project and project activity instance consists of the physical, geographical locations of the distributed Wonderbags limited to within the Republic of South Africa. This includes:

- The Southern Africa Power Pool electricity grid the project cooking system is connected to,
- The fossil fuels used by the project cooking system,
- The Non renewable biomass used by the project cooking system.

3.3.4 Baseline Scenario

The project activity will use methodology AMS-II.C. version 15 and AMS-II.G. version 11.1. This is the most recent valid version available on the UNFCCC website at the time of validation. Since the project activity that apply the indicative simplified methodology AMS-II.C and AMS-II.G, the baseline scenario for this project activity is the one indicated by this methodology, i.e. “In the absence of the project activity, the baseline scenario would be the use of fossil fuels and non renewable biomass for meeting similar thermal energy needs”. The baseline described in the PD complies with the requirements of the methodology, as the energy baseline is the existing level of consumption of non-renewable biomass , fossil fuel and electricity, used by the cooking systems currently in use and which is used in the absence of the project activity.

Validation team based on review of the VCS PD/01/ confirms that the documentary evidence used in determining the above baseline scenarios are relevant, and correctly quoted and interpreted in the project description. The baseline scenarios for each measure and applied methodologies were also confirmed through remote interviews with the end users of technologies and representatives of PP.

Validation team confirms that the baseline scenario opted by the project activity is in accordance with the requirements of the applied methodology/B02/ and is justified.

3.3.5 Additionality

Additionality is demonstrated following the CDM Tool 21 “Demonstration of additionality of small-scale project activities”; Tool 01 “Tool for the demonstration and assessment of additionality” /B03/. This is in line with the methodology, since version 15 of AMS-II.C. and AMS-II.G. states that: “Project participants shall take into account the general guidance to the methodologies, information on additionality, abbreviations and general guidance on leakage”. The project applies paragraph 10(a) of the Tool 21, which establish the investment barrier demonstration for additionality. Wonderbag provides the bags in this Grouped Project either for free, or at a discounted rate, to NGOs and other aid agencies. Hence, Wonderbag relies on carbon revenues to manufacture bags for distribution at zero, or a discounted, cost to the end-user in this grouped project. No revenue is generated either when the Wonderbags are distributed free of cost or provided at a subsidized rate and the only revenue is through carbon credits. Therefore, in the absence of the carbon revenues, the continuation of the status quo, i.e., cooking without the use of an energy efficient Wonderbag, would prevail. Accordingly, the PP has rightly chosen to apply simple cost analysis for demonstration of investment barrier. Evidence for the cost involved in the purchase of Wonderbags has been submitted by the PP /18/. The proposed grouped project qualifies for additionality as per paragraph 10(a) of CDM Tool 21 and CDM Tool 01 as it faces investment barrier /B03/.

3.3.6 Quantification of GHG Emission Reductions and Removals

The equations and choices provided in the two methodologies and all other methodological tools are correctly quoted in the PD/01/. The emission reductions of the project instances of the grouped

project and project activity instance would be calculated using the formulae mentioned in the applied methodologies; AMS-II.C (version 15)/B02-a/ AMS-II.G (version 11.1)/B02-b/.

Validation team based on the review of the PD /01/, confirms that the formulae are correctly presented for the determination of emissions reductions at project instance level. The parameters and equations presented in the PD/01/, as well as other applicable documents, have been compared with the information and requirements presented in the two methodologies respectively. An equation comparison has also been made to ensure consistency between all the formulae presented in the PD/01/ and ER spreadsheet/01/ and methodologies AMS-II.C (version 15)/ B02-a/ and AMS-II.G (version 11.1) /B02-b/.

According to applied methodology AMS-II.C (version 15) /B02-a/ the baseline, project and leakage emissions are calculated as

Baseline Emissions

The baseline emissions from electricity-based cooking systems are calculated as follows in accordance

$$BE_y = E_{BL,y} \times EF_{CO2,ELEC,y} + Q_{ref,BL} \times GWP_{ref,BL}$$

This equation is modified as follows to distinguish between the use of electricity or fossil fuels in the baseline.

$$BE_{ELEC,y} = E_{BL,y} \times EF_{CO2,ELEC,y} + Q_{ref,BL} \times GWP_{ref,BL}$$

Where:

$BE_{ELEC,y}$ Baseline emissions from electricity consumption in year y (tCO_{2e}/y)

$E_{BL,y}$ Energy consumption for the baseline in year y (kWh)

$EF_{CO2,ELEC,y}$ Electricity emission factor. If electricity displaced is grid, the emission factor in year y shall be calculated in accordance with the provisions in ASB0040 version 01.0. If electricity displaced is captive electricity, the emission factor in year y shall be calculated in accordance with the "Tool to calculate baseline, project and/or leakage emission from electricity consumption"

$$BE_{ELEC,y} = 8,891 \text{ tCO}_2\text{e/y}$$

E_{BL} is calculated as follows:

$$E_{BL,y} = \sum_i (n_i \times \rho_i \times o_{i,BL} / (1 - l_y))$$

Where:

n_i	Number of pieces of equipment of the group i baseline equipment retrofitted or that would have been retrofitted
p_i	Electrical power demand (kW) of the group i baseline equipment. In the case of a retrofit activity, electrical power demand is the weighted average of the rated power (kW) of group i baseline equipment. The baseline equipment for this grouped project consists of different electrical stoves. The power ratings of these electrical stoves can be fixed ex ante.
$O_{i,BL}$	Average annual operating hours of the group of i baseline equipment. The operating hours of the baseline equipment in year y can be determined using surveys by measurement of usage hours of baseline equipment. For a large population of baseline equipment: (a) Use a representative sample (sampling determined by a minimum 95% confidence interval and 10% maximum error margin); and (c) Ensure that sampling is statistically robust and relevant, i.e., the selection of the equipment to be analysed for operating hours has a random distribution and is representative of target population (size, location).
l_y	Average annual technical grid losses (transmission and distribution) during year y for the grid serving the locations where the devices are installed, expressed as a fraction. This value shall not include non-technical losses such as commercial losses (e.g., theft). The average annual technical grid losses shall be determined using recent, accurate and reliable data available for the host country. This value can be determined from recent data published either by a national utility or an official governmental body. The reliability of the data used (e.g., appropriateness, accuracy/uncertainty, especially exclusion of non-technical grid loss) shall be established and documented by the project participant. A default value of 0.1 shall be used for average annual technical grid losses, if no recent data are available or the data cannot be regarded accurate and reliable.

$$E_{BL,y} = 9,377,567 \text{ KWh}$$

The number of Wonderbags in use (n_i) can be calculated as follows:

$$n_i = N_w \times (u_w - f_{rate,w}) \times u_{ELEC,w} \times t_w$$

Where:

N_w	The number of Wonderbags of type w distributed
u_w	Share of users actually cooking with a Wonderbag of type w (%)
$u_{ELEC,w}$	Share of users cooking on an electric stove with a Wonderbag of type w (%)
$f_{rate,w}$	Failure rate of the Wonderbags (%)

t_w Active time in the monitoring period for the full population of Wonderbags type w (%)

$$n_i = 9,100$$

The baseline energy consumption can be calculated as follows:

$$E_{BL,FOSSIL,i,y} = FC_i \times NCV_{FOSSIL FUEL i}$$

Where:

FC_i Baseline consumption of fossil fuel i (unit of consumption/year)

$NCV_{FOSSIL FUEL i}$ Net calorific value of fossil fuel i (TJ/unit of consumption)

Calculation for baseline Emission reductions for project activity instances as below;

$$BE_y = BE_{ELEC,y} + BE_{FOSSIL,y}$$

$$BE_y = 17,355 \text{ tCO}_2\text{e}$$

Project Emission

The project emissions from fossil fuel consumption in cooking systems can be calculated as follows in accordance with AMS-II.C.:

$$PE_y = E_{PJ,y} \times EF_{CO2,y} + PE_{ref,y}$$

(Equation 7, AMS-II.C.)

Where:

PE_y Project emissions in year y (tCO₂e)

$E_{PJ,y}$ Energy consumption for the project activity in year y (kWh)

$EF_{CO2,y}$ Electricity emission factor. If electricity displaced is grid, the emission factor in year y shall be calculated in accordance with the provisions in ASB0040 version 01.0. If electricity displaced is captive electricity, the emission factor in year y shall be calculated in accordance with the "Tool to calculate baseline, project and/or leakage emission from electricity consumption"

$PE_{ref,y}$ Project emissions from physical leakage of physical refrigerant from the project equipment in year y (tCO₂e/y)

The equation above is modified for fossil fuel consumption as follows:

$$PE_{FOSSIL,y} = E_{PJ,FOSSIL,i,y} \times EF_{CO2,i,y} \times n_i$$

(Equation 7, AMS-II.C., modified for fossil fuel consumption)

Where:

$E_{PJ,FOSSIL,i,y}$ Project activity energy consumption of fossil fuel i in year y (TJ)

$EF_{CO2,i,y}$ Emission factor for fossil fuel i in year y (tCO₂/TJ)

n_i Number of pieces of equipment of the group i baseline equipment retrofitted or that would have been retrofitted

$$PE_y = 2,893 \text{ tCO}_{2e}$$

The number of Wonderbags in use (n_i) can be calculated as follows:

$$n_i = N_w \times u_w \times u_{FOSSIL,i,w} \times (1 - f_{rate,w}) * t_w$$

Where:

N_w The number of Wonderbags of type w distributed

u_w Share of users actually cooking with a Wonderbag of type w (%)

$u_{FOSSIL,i,w}$ Share of users cooking using fossil fuel i with a Wonderbag of type w (%)

$f_{rate,w}$ Failure rate of the Wonderbags (%)

t_w Active time in the monitoring period for the full population of Wonderbags type w (%)

$$n_i = 3,325$$

The project activity energy consumption can be calculated as follows:

$$E_{PJ,FOSSIL,i,y} = FC_{PJ,i} \times NCV_{FOSSIL FUEL i}$$

Where:

$FC_{PJ,i}$ Project activity consumption of fossil fuel i (unit of consumption/year)

$NCV_{FOSSIL FUEL i}$ Net calorific value of fossil fuel i (TJ/unit of consumption)

According to applied methodology AMS-II.G (version 11.1) /B02-b/ the baseline, project and leakage emissions are calculated as:

Baseline Emission

The biomass emission reductions were calculated as follows:

$$ER_{y,i,j} = B_{y,savings,i,j} \times 0.95 \times N_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected_fossil_fuel}$$

Where:

$ER_{y,i,j}$	Emission reductions by project device type <i>i</i> and batch <i>j</i> during year <i>y</i> in tCO ₂ e
$B_{y,savings,i,j}$	Quantity of woody biomass that is saved in tonnes per cookstove device type <i>i</i> and batch <i>j</i> during year <i>y</i>
$N_{y,i,j}$	Number of project devices of type <i>i</i> and batch <i>j</i> operating during year <i>y</i>
μ_y	Adjustment to account for any continued use of pre-project devices during the year <i>y</i> when applying equations 7 and 8 (fraction). Use 1.0 in other cases.
$f_{NRB,y}$	Fraction of woody biomass that can be established as non-renewable biomass
$NCV_{biomass}$	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne, based on the gross weight of the wood that is 'air-dried'.
$EF_{projected_fossil_fuel}$	Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers.

The quantity of woody biomass that is saved due to the project activity is calculated as follows in accordance with option 2 of the AMS-II.G. methodology:

$$B_{y,savings,i,j} = B_{old,i,j} - B_{new,KPT,i,j}$$

Where:

$B_{old,i,j}$	Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type <i>i</i> and batch <i>j</i>
$B_{new,KPT,i,j}$	Annual quantity of woody biomass used in tonnes per project device of type <i>i</i> and batch <i>j</i> , measured as per the Kitchen Performance Test (KPT) protocol. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines. (e.g. the KPT Protocol listed by Clean Cooking Alliance)

Leakage Emissions: No leakage emissions have been identified for the project activity as the introduction of the Wonderbag does not replace the baseline stoves. So the leakage emissions considered 0 tCO_{2e}.

Summary of net GHG emission reductions or removals:

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y = Emission reductions in year y (t CO_{2e}/yr)

BE_y = Baseline emissions in year y (t CO₂/yr)

PE_y = Project emissions in year y (t CO_{2e}/yr)

The total emission reductions calculated for the crediting period are 144,755 tCO_{2e}. Validation team confirms that all relevant assumptions and data are listed in the project description, including their references and sources and that all data and parameter values used in the project description are considered reasonable in the context of the project and all estimates of the baseline emissions can be replicated using the data and parameter values provided in the project description.

Validation team confirms that the methodology /B02/, standardized baseline/B05/ and applied tool /B03/ have been applied correctly to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals. Following findings had been raised on this section of the validation report and have been resolved.

3.3.7 Methodology Deviations

No methodology deviations have been applied to the project activity.

3.3.8 Monitoring Plan

The grouped project employs two baseline and monitoring methodologies namely AMS-II.C., version 15 and AMS-II.G., version 11.1 /B02/. According to section 5.2.1 of PD/01/, the parameters to be monitoring ex post as per the requirements of the two methodologies are given below.

Parameters Determined ex-ante

The following parameters are determined ex-ante and mentioned in section 5.1 of the PD:

Parameter	Unit	Value	Assessment
EF _{CO₂,ELEC,y}	tCO ₂ /MWh	0.9481	- Fixed ex-ante - ASB0040-2018 Standardized baseline: "Grid emission factor for

			Southern African Power Pool".	
$EF_{CO2,i,y}$	kgCO ₂ /TJ	Paraffin: 71,900 kgCO ₂ /TJ LPG: 63,100 kgCO ₂ /TJ Coal: 96,100 kgCO ₂ /TJ.		- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used in accordance with paragraph 32 of AMS-II.C.
$NCV_{FOSSIL FUEL i}$	TJ/Unit of measurement	Paraffin: 0.000038 TJ/litre LPG: 0.000046 TJ/kg Coal: 0.024300 TJ/tonne		- Fixed ex-ante - South African Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry
FC_i	Unit consumption of	Fossil Fuel i	Baseline consumption	- Fixed ex-ante - The baseline consumption is used in accordance with paragraph 32 of AMS-II.C. The values are based on surveys conducted in accordance with the CDM sampling guidance.
		Paraffin	224.6 litres/year/adult equivalent	
		LPG	74.5 kg/year/adult equivalent	
		Coal	1.3 tonnes/year/adult equivalent	
ρ_i	kW	1.5		- Fixed ex-ante - The baseline consumption is used in accordance with AMS-II.C. The values are based upon the specifications of an electric stove.
$O_{i,BL}$	Hours/adult equivalent	159		- Fixed ex-ante - The baseline consumption is used in accordance with paragraph 32 of AMS-II.C. The values are based on surveys conducted in accordance with the CDM sampling guidance.

$f_{NRB,y}$	Fraction	0.71	- Fixed ex-ante - Calculated from publicly available data.
$EF_{\text{projected_fossil_fuel}}$	tCO ₂ e/TJ	73.2	- Fixed ex-ante - The default value was selected in accordance with paragraph 25 of AMS-II.G.
μ_y	-	1	- Fixed ex-ante - AMS-II.G requires the use of a default adjustment factor of 1.0 in project activities that apply any equations in the methodology other than equations 7 and 9.
NCV_{biomass}	TJ/tonne	0.0156	- Fixed ex-ante - AMS-II.G allows for the use of a default wood fuel value of 0.0156 TJ/tonne, based on the gross weight of the wood that is 'air-dried'.
$B_{old,i,j}$	Tonnes/year/adult equivalent	0.87	- Fixed ex-ante - The baseline survey was conducted in accordance with the CDM sampling guidance and the internationally Recognized Kitchen Performance Test Protocol provided by the Clean Cooking Alliance.

Parameters monitored ex-post

SI.No.	Parameters/01/	Methodology(B02)	Description/01/
1	$E_{BL,y}$	AMS-II.C	Energy (specifically electricity) consumption for the baseline in year y.

2	$E_{PJ,y}$	AMS-II.C	Energy (specifically electricity) consumption for the project activity in year y
3	n_i	AMS-II.C	Number of pieces of equipment of the group i baseline equipment retrofitted or that would have been retrofitted.
4	N_w	AMS-II.C	The number of Wonderbags of type w distributed
5	o_i	AMS-II.C	Operating hours (i.e. cooking time using a Wonderbag) of group of i project devices (i.e. electrical stoves) in the time interval t in year y
6	l_y	AMS-II.C	Average annual grid loss of the national South African grid including transmission and distribution.
7	u_w	AMS-II.C	Share of users cooking with a Wonderbag in year y.
8	$u_{ELEC,w}$	AMS-II.C	Share of users cooking with electric stoves with a Wonderbag in year y.
9	$E_{BL,FOSSIL,i,y}$	AMS-II.C	Baseline energy consumption of fossil fuel i in year y.
10	FC_i	AMS-II.C	Project activity energy consumption of fossil fuel i in year y.
11	$E_{PJ,FOSSIL,i,y}$	AMS-II.C	Project activity energy consumption of fossil fuel i in year y.
12	$\mu_{FOSSIL,i,w}$	AMS-II.C	Share of users cooking with fossil fuel i in year y
13	$f_{rate,w}$	AMS-II.C	Failure rate of Wonderbags.
14	t_w	AMS-II.C	Active time in the monitoring period for the full population of Wonderbags type w.
15	$N_{y,i,j}$	AMS-II.G	Number of project devices of type i (specifically biomass stoves) and batch j operating during year y.

16	$B_{\text{new,KPT},i,j}$	AMS-II.G	Annual quantity of woody biomass used in tonnes per project device of type i
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In accordance with section 3.21.1 of the VCS Standard (version 4.0) /B01-a/ all documents and records will be kept in a secure and retrievable manner for at least two years after the end of the project crediting period. The data collecting and management methods as provided in section 5.3.1 of the VCS PD/01/ are acceptable to the validation team. The validation team interviewed representatives of PP and it was established that the database of all the project equipment distributed by PP is created and maintained. The entire database will be kept with protected by PP for a period of more than two years. In addition, a two samples of equipment invoices was studied and was found to contain information in compliance with the monitoring requirements of the methodologies AMS-II.C. (version 15)/B02-a/ and AMS-II.G (version 11.1)/B02-b/.

The validation team considers that the means of implementation of the monitoring plan, including the data management, monitoring equipment and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the proposed grouped project and project instances therein can be reported ex post and verified. In addition, the sampling plan meets the requirements of the monitoring methodologies AMS-II.C (version 15) /B02-a/ and AMS-II.G (version 11.1) /B02-b/ and the Standard of Sampling and Surveys of CDM project activities and Programme of Activities (version 08.0) /B04-a/ and Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04) /B04-b /.

Validation team confirms that the overall monitoring plan complies with the requirements of the methodologies AMS-II.C (version 15)/B02-a/ and AMS-II.G (version 11.1)/B02-b/ including applicable tool(s), the monitoring arrangements describes in the monitoring plan are feasible within the project design and the project proponents will be able to implement the described monitoring plan.

3.4 Non-Permanence Risk Analysis

This is not applicable to the project activity as the Project is not an AFOLU (Agriculture, Forestry and Other Land Use) project.

4 VALIDATION CONCLUSION

The Project Participant, Wonderbag UK Limited, has commissioned the VVB, Carbon Check (India) Private Ltd. to perform an independent validation of the VCS Project Activity “Recipe for Change Grouped Project” in Republic of South Africa. This report summarises the findings of the validation of the project, performed on the basis of VCS criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation process was performed on the basis of all guidance and criteria as provided in VCS Standard version 4.0/B01-a/, VCS Program Guide version 4.0/B01-b/, VCS Validation and Verification Manual version 3.2/B01-c/ and Registration & Issuance Process version 4.0/B01-d/.

The project activity provides the information in PD /01-3/ as required by the VCS Standard /B01-a/ and Validation and Verification Manual /B01-c/ and in Carbon Check's opinion meets the requirements of the applied baseline and monitoring methodologies, AMS-II.C version 15 and AMS-II.G version 11.1/B07/ and is likely to achieve the estimated emission reductions. The validation has been performed using a risk-based approach, as described above. The expected average emission reductions from the project activity are 20,679 tCO₂e/year and the total for the crediting period is 144,755 tCO₂e.

Carbon Check (India) Private Ltd concludes the validation with a positive opinion that the VCS Project Activity "Recipe for Change Grouped Project" in Republic of South Africa, as described in the PD (version 3.0, dated 06/05/2021) /01-3/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodologies, tools and guidelines.

The selected baseline and monitoring methodologies (AMS-II.C, Version 15 and AMS-II.G, Version 11.1) is applicable to the project and correctly applied. Carbon Check (India) Private Ltd therefore requests the registration of the project as a VCS project activity.

CCIPL's validation opinion is purely based on the information made available to us by the project proponent during the course of validation and hence CCIPL cannot guarantee the accuracy or correctness of the information. Keeping this in mind, no party can hold CCIPL liable for any decisions made or not made in this report.

APPENDIX 1.1: REFERENCE DOCUMENTS

Ref	Document
/01/	Project Description titled: 1. Recipe for change group project Version 01 dated 22/01/2021 2. Recipe for change group project Version 02 dated 03/03/2021 3. Recipe for change group project Version 3.0 dated 06/05/2021
/02/	ER sheet and GEF sheet corresponding to: 1. /01-1/ 2. /01-3/
/03/	Database for the Wonderbags distributed till date in the project
/04/	Wonderbag training manual
/05/	Wonderbag distribution agreement and questionnaire
/06/	Technical Specifications of Wonderbag heat retention cooking device.
/07/	Distribution agreement between Wonderbag NPC and PMB & District Community Chest, dated: June 01/06/2020.
/08/	Wonderbag distribution questionnaire
/09/	Emissions Reduction Purchase Agreement (ERPA)
/10/	Local Stakeholder engagement report, dated: November 2020
/11/	Wonderbag Recipe book with the carbon waiver statements.
/12/	Wonderbag Baseline Habit Survey spread sheet.
/13/	Distribution scanned file for the start date of grouped project activity 15/03/2019 Maqwaveni Informal Settlement in Kwa Zulu Natal
/14/	Declaration(s) from Project proponent on the following: - Project not registered or under process of registration in any other Emissions Trading Programs and Other Binding Limits. - Project not registered or under process of getting and Other Forms of Environmental Credit - The project has not been registered and is not seeking registration under any other GHG program - Projects not Rejected by Other GHG Programs - Declaration from PP confirming that the project is not claiming any other environmental credits other than VCUs.
/15/	Trade mark maintaining registration notice mail dated 23/08/2019
/16/	Certificate of incorporation of “Wonderbag UK Limited” dated 22/10/2018
/17/	Contract with the Wonderbag manufacturers “Natural Balance Global (PTY) LTD. And Mozimax
/18/	Evidence for the purchase price of Wonderbags

APPENDIX 1.2: BACKGROUND DOCUMENTS

Ref	Document
/B01/	VCS Requirements a. VCS Standard (v4.0, dated 19/09/2019) b. VCS Program Guide (v4.0, dated 19/09/2019) c. VCS Validation and Verification Manual version (v3.2, dated 19/10/2016) d. Registration & Issuance Process (v4.0, dated 19/09/2019) e. VCS Programme Definitions version (v4.0, dated 19/09/2019) f. VCS PD template version 4.0
/B02/	Applied baseline and monitoring methodologies a. AMS-II.C. version 15, “Demand-side energy efficiency activities for specific technologies” b. AMS-II.G. version 11.1, “Energy efficiency measures in thermal applications of non-renewable biomass”
/B03/	Methodological Tool • CDM Tool 21 “Demonstration of additionality of small-scale project activities” Version 13.1 • CDM TOOL 01 “Tool for the demonstration and assessment of additionality” Version 07.0.0 • CDM Tool 30 “Calculation of the fraction of non-renewable biomass” Version 03.0
/B04/	a. “Standard for sampling and surveys for CDM project activities and programme of activities” (version 08.0) b. Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04)
/B05/	Standardized Baseline (ASB0040): Grid emission factor for South African Power Pool version 1
/B06/	Website and links: 1. IPCC (http://www.ipcc-nggip.iges.or.jp) 2. http://cdm.unfccc.int 3. http://www.v-c-s.org

APPENDIX 2: ABBREVIATIONS

CDM	Clean Development Mechanism
BE	Baseline Emission
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
DPR	Detailed project report
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
ER	Emission Reduction
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
MW	Mega Watt
MWh	Mega Watt Hour
NA	Not Applicable
OSV	On Site Visit
PD	Project Description
PP	Project Proponent
QC/QA	Quality control/Quality assurance
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit
VVM	Validation and Verification Manual
VVS	Validation and Verification Standard

APPENDIX 3: CERTIFICATES OF COMPETENCE



Carbon Check (India) Private Ltd.

Sanjay Agarwalla

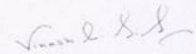
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

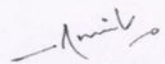
Validator	☒	Team Leader	☒	Technical reviewer	☒
Verifier	☒	Technical Expert	☒	Local Assessor ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 3.1	☒	TA 5.2	☒	TA 9.2	☒	TA 13.2	☐
TA 1.2	☒	TA 4.1	☒	TA 8.1	☐	TA 10.1	☐	TA 14.1	☐
TA 2.1	☒	TA 5.1	☒	TA 9.1	☒	TA 13.1	☒		



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

Date of Approval
24/12/2020

Valid Till
24/12/2021

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision
01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

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Carbon Check (India) Private Ltd.

Vikash Kumar Singh

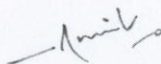
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☒
Verifier	☒	Technical Expert	☒	Local Assessor ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 3.1	☒	TA 5.2	☐	TA 9.2	☐	TA 13.2	☒
TA 1.2	☒	TA 4.1	☒	TA 8.1	☐	TA 10.1	☐	TA 14.1	☐
TA 2.1	☐	TA 5.1	☐	TA 9.1	☐	TA 13.1	☒		



Mr. Amit Anand
CEO

Date of Approval
24/12/2020

Valid Till
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01/03/2020	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision

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APPENDIX 4: FINDINGS LOG

Finding	CL 01
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding (DOE)	PP needs to provide the below listed documents: - Evidence for the project start date on 15th March 2019. - Project Ownership evidence as per section 3.6.1 of VCS Standard.Evidence for the demonstration of financial additionality of the project.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	1. Evidence for the project start date: Maqwaveni activation_2019-03-15 2. Project Ownership evidence: 2019-07-24 Wonderbag_Full TM report, Notice of Acceptance & Acknowledgement and Wonderbag Declarations for PD 3. Demonstration of financial additionality: 2020-11-30 WB Invoice to GRC and 2020-12-29 WB Invoice to URC in UGX
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the requested documents to validate the project activity.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 02
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding (DOE)	PP needs to clarify the statement in section 3.2 of the PD “ <i>The service levels of the installed heat-retaining Wonderbags is 100% of the service level of the stoves used to cook a household’s food (i.e. baseline equipment)</i> ”.

Finding	CL 02
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The service level of a stove can be taken as providing 1 meal to the household. Cooking with or without a Wonderbag will still provide the household with 1 meal. The service level of cooking with the Wonderbag is 100% of cooking without a Wonderbag because both scenarios involve cooking 1 meal.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Justification provided by PP is acceptable by the validation team.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 03
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding (DOE)	PP has stated 90/10 confidence / precision in the sampling plan during monitoring. Clarification is requested on compliance of this to the CDM sampling standard in case of annual monitoring or cross CPA sampling.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The confidence/precision has been revised in the project description to 95/10 in order to comply with the CDM sampling standard for cross CPA sampling.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has revised the PD stating the sampling confidence / precision as 95/10 for all the cases which is deemed acceptable to the validation team and in line with the CDM Sampling Standard.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 04		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (DOE)	Following clarifications are raised on the submitted ER spread sheet: - Calculation procedure for the value of the parameter $B_{new,KPT,i,j}$ is 1.17 required. - For the parameter “$f_{rate,w}$” the calculation method is giving higher value (for discounting of dropouts and failures). - Assumed reduction as 83%. Clarification requested for the application of this value (for electricity and FF).		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	- The calculated of the parameter $B_{new,KPT,i,j}$ was revised in accordance with the following. The parameter $B_{new,KPT,i,j}$ is calculated using the percentage reduction reported for Wonderbag’s registered CDM project in Zambia. This percentage is multiplied by the Bold parameter calculated from the Baseline survey results. - The calculation method using parameter “$f_{rate,w}$” and “u_w” has been revised to yield the correct number of active bags. The revised calculated takes the total number of Wonderbags and multiplies it by the share of users cooking with the Wonderbag (u_w) minus the failure rate ($f_{rate,w}$) - The reduction of 83% was assumed for the estimation of the ex-ante reductions. This value was applied to estimate the cooking time and fossil fuel consumption in the project activity (i.e. cooking with a Wonderbag) for the purpose of the ex-ante calculations. The actual cooking time and fossil fuel consumption in the project activity are monitored parameters and will be monitored through surveys.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	- PP has revised the calculation for $B_{new,KPT,i,j}$ and provided the revised PD and emission reduction spread sheet and thus found to be in line with project activity. - PP has revised the distribution of wonderbags as per various project activity instances and each project activity instance will contain 20,000 bags maximum and now the calculation is done on this distribution basis. - Justification provided by the PP is acceptable.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

inding	CL 05		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (DOE)	Few of the weblink provided in the footnotes of the VCS PD are not accessible. PP needs to check and revise them accordingly.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The broke weblinks in the PD have been revised.		
DOE Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	PP has revised the not accessible links in the revised PD accordingly.		
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CL 06		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (DOE)	In section 4.4.2 of the PD, the table provided is not inline with the Emission reduction spread sheet. Moreover, the references provided in the emission reduction spread sheet , under sub sheet “inputs” for the methodology references is incorrect. PP needs to rectify the errors.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The values provided in the emission reduction summary table have been revised with the first project activity instance figures. It should be noted that there are no explicit values for the Baseline and Project emission columns under AMS II.G. as the methodology calculates the emission reductions directly. The methodology references in the spreadsheet have been corrected.		

Finding	CL 06
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has rectified the errors and provided the revised PD and the Emission reduction spread sheet.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 07
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding (DOE)	During the remote interviews it was observed that PP had not included the wonderbags which were distributed during the baseline survey in the “wonderbag SQL DB” master database. PP need to clarify the same.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The database provided has the latest available inputted data. The data collection processes for the distribution data is ongoing. The Wonderbags distributed during the baseline survey are part of the ongoing process to include distributed Wonderbags.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the Updated “ Wonderbag SQL DB” which is now inline with the baseline survey data base.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 01
Classification	☒ CAR ☐ CL ☐ FAR

Finding	CAR 01
Description of finding (DOE)	PP needs to confirm whether the submitted PD involves Project instance 1 also and accordingly update all the relevant sections of the PD.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The PD does include Project Activity Instance 1. The PD has been updated accordingly
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the revised PD with the inclusion of Project instance 1.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 02
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding (DOE)	In section 1.4 of the PD, PP needs to cover all eligibility criteria points as per section 3.5.15 and 3.5.16 of VCS standard.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	In section 1.4 of the PD has been revised to cover all eligibility criteria points as per section 3.5.15 and 3.5.16 of VCS Standard, Version 4.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has provided the revised PD which covers all the eligibility criteria points stated in VCS standards Version 4.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 03		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	Demonstration of meth applicability (both AMS II.C and AMS II.G) for the threshold limit of 60 GWh annual energy savings has not been correctly in section 3.2 of the PD.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The demonstration of methodology applicability for both AMS II.C and AMS II.G have been revised for the annual energy savings limits.		
DOE Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	PP has revised the section 3.2 of the PD.		
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CAR 04		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	Meth applicability criterion for para 9 of AMS II.G has not been demonstrated in the submitted PD in section 3.2.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The applicability criterion for paragraph 9 of AMS II.G has been added along with a description of compliance in the project description.		
DOE Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	PP has demonstrated the methodology applicability criteria para 9 of AMS II.G version 11.1 in the revised PD.		
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CAR 05		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	In section 3.4 of the PD, the stated baseline scenario is incomplete for the project.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Section 3.4 has been revised with the complete baseline scenario for the project.		
DOE Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	PP has revised section 3.4 of the PD.		
Conclusion Tick the appropriate checkbox	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CAR 06		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (DOE)	The reported values for baseline (for biomass, fossil fuel and number of hours of cooking on electric stoves) is determined on per household basis whereas the number of persons for the households was varying. PP needs to clarify how does this comply with the KPT protocol. Also PP is requested to clarify the reason of taking the wattage of electric stove as 1.5 kW (considering that the baseline survey reported households using stoves with 1 / 2/ 3/ 4 plates).		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The baseline values have been revised to account for the number of persons in a household using the KPT's adult equivalent definitions. The revised baseline values can be seen in the "Inputs" tab of the revised ex ante calculation spreadsheet. This adult equivalent consumption figure is converted to a per household value using the average adult equivalent figure in the survey in order to calculate the emission reductions at a Wonderbag level.		

Finding	CAR 06
	The wattage of 1.5kW refers to the power rating of a single plate on a stove. Since a Wonderbag can only accommodate a single pot, only a single plate will be used for cooking irrespective of the type of stove. Furthermore, given the social context that Wonderbags are primarily used in poorer communities, the lower power stove plates are likely to be used as these result in a lower current draw. The government provides a Free Basic Electricity grant of 50kWh to households however this grant limits the current draw in these households to 20A. This further limits the stove plates that a household can use. Documentation published by Eskom has been provided supporting the 1.5kW rating selection in addition to the stove specifications.
DOE Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	PP has revised the baseline values considering on the number of per adults in the PD and the Emission reduction spread sheet. Justification provided by the PP in regards with the 1.5 kW power rating of the single stove is acceptable
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed