Validation report form for post-registration changes for CDM project activities

(Version 03.0)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION	
Title and UNFCCC reference number of the project activity	Title: Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia UNFCCC reference number: 6488
Process track	☒ Prior approval ☐ Issuance ☐ Renewal of crediting period
Version number of the validation report	1.1
Completion date of the validation report	10/07/2020
Type(s) of PRCs	☐ Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents[1] ☐ Corrections ☒ Changes to the start date of the crediting period ☐ Inclusion of a monitoring plan ☒ Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents ☒ Changes to the project design ☐ Changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	03.1 of 19/06/2020
Project participants	Melewar Properties Sdn Bhd. (Malaysia) Perenia Pty Ltd. (Australia)
Host Party	Malaysia
Applied methodologies and standardized baselines	AMS-III.H. ver. 16 - Methane recovery in wastewater treatment
Mandatory sectoral scopes	13 : Waste handling and disposal
Conditional sectoral scopes, if applicable	N/A
Name and UNFCCC reference number of	Carbon Check (India) Private Ltd.

[1] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

the DOE	E-0052
Name, position and signature of the approver of the validation report	Amit Anand, CEO 

SECTION A. Executive summary

>> Carbon Check India Pvt. Ltd. (CCIPL) commissioned by Perenia Pty Ltd., has performed the validation of post registration changes for the project activity "Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia" in Malaysia, CDM Registration Reference N° 6488. The aim of the project activity is to capture anthropogenic methane emissions from the Palm Oil Mill anaerobic effluent treatment system and utilize the methane gas to generate renewable energy. The project is located within the Melewar Palm Oil Mill located at 1.6 km off the 45 km Lahad Datu – Sandakan Highway, Lahad Datu, Sabah in East Malaysia with GPS coordinates of 5°16'17" N, 118°3'7" E.

The term "UNFCCC criteria" refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board. The independent Validation by the DOE is required on the Registered CDM PDD to confirm the post registration changes with respect to actual implementation and operation carried out by the project activity. This report summarises the post registration changes of the project activity with respect to VVS for PA (version 02.0) **/B01/**. This report contains the findings and resolutions from the validation and a validation opinion.

Validation Scope:
The scope of the PRC validation is defined as an independent and objective review of the revised PDD /**02/** to verify the impact of proposed revision of the PDD /**02/** respectively. The Validation team confirms the contractual relationship between the DOE, Carbon Check (India) Private Ltd., and the Project Participant. The team assigned to do the validation meets Carbon Check (India) Private Ltd's internal procedures including the UNFCCC requirements for the team composition and competence. The validation team has conducted a thorough contract review as per UNFCCC and Carbon Check procedures and requirements.

Validation methodology and process:
The validation has been performed as described in the CDM VVS for PA (version 02.0) /**B01/** and constitutes the following steps:

- Review of the registered PDD (Version: 02.4; Dated: 24/07/2012) /**01/**;
- Review of the revised PDD (Version: 03.1; Dated: 19/06/2020) /**02/**;
- Desk review of relevant documents;
- Interview with representatives of the PP.

This report is based on the assessment of the revised PDD undertaken through application of standard auditing techniques including but not limited to document review and stakeholder interview, review of the applicable/applied methodology and its underlying formulae and calculations.

The report contains the findings and resolutions from the validation and a validation opinion on the proposed post-registration changes thus confirming the revised project design as document is sound and reasonable and meets the stated requirements and identified criteria. The validation confirms that the implementation of the post registration changes is in line with the applied methodology and all other applicable tools and guidance.

The report is the combined assessment opinion for all the changes that are proposed in the PDD and request is submitted for prior approval by CDM EB.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings

1.	Team Leader, Validator & Technical expert	EI	Buragohain	Champok	CCIPL	√	X	√	√

B.2. Technical reviewer and approver of the validation report on PRCs

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Singh	Vikash Kumar	CCIPL
2.	Approver	IR	Anand	Amit	CCIPL

SECTION C. Means of validation

C.1. Desk/document review

>>The registered project design document (PDD) Version 2.4 of 24/07/2012 /**01**/ and revised PDD version 03 of 15/05/2020 and version 3.1 of 19/06/2020 /**02**/ in particular the baseline estimations, additionality of the project activity and the monitoring plan were assessed as part of the validation. In addition, the validation report /**03/** for the project were reviewed.
Appendix 3 lists the documentation that was reviewed during the verification.

C.2. On-site inspection

Duration of on-site inspection: NA				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	NA	NA	NA	NA

On site visit for this validation of post registration changes is not done.

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Raya	Sirinut	Perenia PTY Ltd.	07/05/2020	Updated PDD, emission reduction calculations, application of methodology etc.	Champok Buragohain
2.	Nathan	Selva	Melewar Properties Sdn Bhd	07/05/2020	The project status, operational records, commissioning details, change in project design, approval, monitoring procedure etc	
3.	Chor Laup	Chan				
4.	Lee	Stephen				

C.4. Sampling approach

>>N/A

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form			
Temporary deviations from the registered monitoring plan,			

applied methodologies, standardized baselines or other methodological regulatory documents			
Corrections			
Changes to the start date of the crediting period	1		
Inclusion of a monitoring plan			
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents			
Changes to the project design			
Changes specific to afforestation and reforestation project activities			
Others (please specify)			
Total	1	0	0

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	Comparing the PDD /**02**/ with the latest PDD template form provided by CDM EB listed in UNFCCC website /**B04/.**
Findings	N/A
Conclusion	The validation team confirms that the revised PDD completed by the PP is compliance with the latest PDD form available at UNFCCC website.

D.2. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.3. Corrections

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.4. Changes to the start date of the crediting period

Means of validation	It has been observed that the project activity did not start its operation on the date forcasted in the registered PDD. Thus, the project participants requested the change pf start date of crediting period in accordance with provisions from CDM project standard for project activity version 2.0 /**B03**/. The proposed change of start date of crediting period is from 01/01/2013 to 24/06/2016 (a delay of 3 years 5 months 24 days). Thus, following paragraph of project standard is applicable: *236. If the proposed change to the start date of the crediting period of a registered CDM project activity is more than two years, or more than four years for a registered CDM project activity hosted by a least developed country, the project participants shall:* *(a) Demonstrate that the project activity remains additional;* *(b) Demonstrate that the original baseline scenario established in the registered PDD remains valid, or update the baseline scenario using the latest data, as appropriate;* *(c) Demonstrate that substantive progress has been made by the project participants to start the project activity.* For item (a) above, it is noted that the project activity remains additional as discussed in section D.7 below. For item (b) above, it is noted that the original baseline scenario identified during

registration of the project activity is still valid. In the baseline scenario, POME is treated through a series of open anaerobic and aerobic ponds wastewater treatment system without biogas recovery system, while electricity is generated primarily from biomass-based boilers and diesel gensets as back-up. The baseline scenario consisted of six open anaerobic ponds and five aerobic ponds, two settling ponds and one polishing plant before discharged to the plantation for land irrigation. It is verified that presently no regulatory or contractual requirements that enforces implementation of a specific wastewater treatment technology, such as anaerobic digester or aerobic treatment system at palm oil processing plants for effluent treatment. Malaysian regulation allows utilization of open lagoon systems for wastewater treatment in the palm oil industry as per requirement in Environmental Quality (Prescribed Premises) (Crude Palm Oil) Regulations 1977 /**B05**/.

The open ponds system without methane recovery is able to treat the wastewater and meet the current environmental standards which specified that the final discharge of the treated POME shall be within 50 mg BOD/litre. There are no policies or legislation that prevents the existing open ponds system from continuing operation. There are no existing, pending or planned national regulatory requirements that govern the GHG emissions from agro-industry operations (specifically palm oil mill processing activities).

Therefore, the original baseline scenario identified during registration of the project activity is still valid and meets applicable eligibility requirements of the methodology; AMS-III.H (version 16; EB 58) /**B06**/.

For item (c) above, it is noted that substantive progress made by project proponent to start the project activity. The project proponent signed engagement letter with technology supplier (Watermech Engineering Sdn. Bhd) on 05/08/2011 /03/, and expected to complete the commissioning on 01/01/2013 (i.e the initial proposed start date of crediting period). However, successful commissioning and handover of the project happened on 24/06/2016 /**04**/ which is the revised start date of crediting period for the project activity. Below activities show, project proponent made substantive progess to start the project activity:

Activity	Date	Evidence
Engagement letter with technology supplier (Watermech Engineering Sdn. Bhd)	05/08/2011	Letter of Acceptance of Watermech Offer /03/.
Soil investigation work for proposed biogas plant	17/08/2011	Invoice rasied by contractor (Jarabumi Bergabung Sdn Bhd.) /05/.
Road surfacing work for the biogas plant	23/07/2012 to 03/10/2013	Invoice raised by contractor (Kong Wuii Keong Sdn.Bhd.) /06/
Piling works for the foundation of proposed bio-gas plant (Final stage work)	29/05/2013	Invoice raised by contractor (Syarikat Wing Contractor) /07/
Electric installation work for the biogas plant	25/06/2014	Invoice raised by contractor (Magtron Electrical Engineering Sdn.Bhd.) /08/
Firefighting work at biogas plant	31/03/2015	Invoice raised by contractor (KBK Engineering Sdn. Bhd.) /09/
Pre-commissing activities	01 October 2015 to 23 June 2016	Pre-commisisong reports by Watermech Engineering Sdn. Bhd.

	<table><tr><td></td><td></td><td>/12/</td></tr><tr><td>Successful commission and handover of the project</td><td>24/06/2016</td><td>Commisisong and handover report by Watermech Engineering Sdn. Bhd. /04/</td></tr></table> From above, it is evident that continued work was in process to complete the project activity although delay happened only due to delay in completion of works by contractors engaged for different activities.
Findings	CL1 was raised to clarify with supporting evidence to justify whether project meets para 236 of CDM project standard for project activities version 2.0. PP provided credible evidence for the same and updated the PDD accordingly. Hence CL is closed.
Conclusion	CCIPL confirms that the delay in project implementation happened due to the delay in construction activities. No changes have occurred to the project activity that resulted in a less conservative baseline, and that substantive progress has been made by the project participants to start the project activity. So, the project fulfils the requirement of para 236 of CDM project standard for PA, version 2.0. Hence, change in start date of the crediting period from 01/01/2013 to 24/06/2016 is accepted.

D.5. Inclusion of a monitoring plan

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

Means of validation	In the registered PDD, the Global warming potential (GWP) of methane (CH_4) is mentioned as 21 which is applicable for the first commitment period. Since the second commitment period is started now, PP has revised the GWP to 25. Though this need not to be reported as PRC as per the EB guidelines, PP has revised PDD along with the change in start date of crediting period which requires prior approval. Due to the change in GWP of CH_4, the annual average emission reduction is changed to 53,232 tCO_2e (from the estimated value in the registered PDD of 44,715 tCO_2e) /**11**/. Validation team checked the ER calculation sheet and found that the value estimated is correct /**11**/. Although the above change does not affect the registered monitoring plan and any deviation of monitoring from applied methodology it is regarded a permanent deviation from methodological regulatory document which is consistent with EB decision.
Findings	N/A
Conclusion	The validation team checked the updated PDD and ER calculation sheet and confirms the following: - The corrections with respect to change in GWP in calculating BE, PE & ER are correctly reported in the PDD - The emission reduction calculation provided in the ER calculation sheet is clear, transparent and correct. Validation team could also calculate the revised emission reduction from the registered ER sheet by just changing the GWP of methane. Hence it is confirmed that no other changes were made in the ER calculation sheet except the change in GWP of methane. - The revised emission reduction reported in the PDD (i.e. 53,232 tCO_2e) is verified to be correct. The corrections made in the revised PDD are verified and found to be minor typo which does not have any impact on registered monitoring plan or any deviation of monitoring from the applied methodology. The deviation is considered a permanent deviation from methodological regulatory document which is consistent with EB decision.

D.7. Changes to the project design

Means of validation	A change in project design has been proposed from the registered project design as below: In the registered PDD, the sludge after sludge dewatering system planned to divert to the composting plant which is now proposed to land application without the compost plant. Since a component is removed from the activity, it complies paragraph 241(d) of CDM project standard version 2.0. Therefore, the validation team has accessed the impact of the proposed change as per VVS for PA paragraph 303 and project standard for PA para 242 as below: a) The applicability and application of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents with which the project activity has been registered; *The removal of the compost plant from the project activity does not have any impact on applicability of the applied methodology as even after removal of the compost plant the project activity still involves the installation of a new covered anaerobic digester tank system equipped with methane capture and collection system without sludge treatment. The proposed project activity has also generated renewable electricity from biogas captured during wastewater treatment. However, as no emission reductions are claimed from generation of renewable energy, the generated electricity has been excluded from the project boundary to avoid any future confusion. Therefore, even after the proposed design change the proposed activity is applicable to the applied methodology*. b) The compliance of the monitoring plan with the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents *There is no change to the monitoring plan of the project activity from the registered monitoring plan. PP kept the monitoring provision of end use of sludge with the registered design of the project (i.e. with the composting plant) and now even after the removal of the composting plant, PP continue to monitor the end use of sludge application ensuring aerobic conditions. The applied methodology AMS-III.H version 16 states "If the methane emissions from anaerobic decay of the final sludge are to be neglected because the sludge is controlled combusted, disposed of in a landfill with methane recovery, or used for soil application, then the end-use of the final sludge will be monitored during the crediting period". PP has kept the same provision under the monitoring plan which is not changed with the proposed change. Hence, monitoring plan remains in compliance with the applied methodology*. c) The level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan; *The level of accuracy and completeness in the monitoring plan does not change as the same monitoring and measuring arrangements are in place even after the proposed design change*. d) The additionality of the project activity The additionality of the project was demonstrated applying benchmark analysis. The project generates no significant revenue except for cost savings from diesel displacement, and revenue from Certified Emission Reductions (CERs). The Equity IRR of the proposed project activity without the additional revenue from the sale of CERs is -11.7%. The final project cost is Malaysian Ringgit (MR) 15,829,041.08 as against MR 17,002,050.00 estimated in the registered PDD. The project cost was verified from actual payments details made for the project activity /**05-10**/. The project cost is reduced only by 6.9% as against estimated in the registered PDD. As detailed in the registered PDD, even with 100% reduction of the project cost, the equity IRR does not reach the benchmark considered in the registered PDD. Therefore, the project remains additional with the proposed design change.

	e) The scale of the project activity *Due to the proposed change ther is no impact on the scale of the project activity. The project activity remains a small-scale project activity*. This change does not require prior approval as per Appendix of CDM project standard version 2.0 1(d).
Findings	N/A
Conclusion	The change in the project design reported does not impact the following: • The applicability and application of the applied methodology • Compliance of the monitoring plan with the applied methodology • The level of accuracy and completeness in the monitoring • The additionality of the project activity • The scale of the project activity The same is explained in the revised PDD, Appendix 7. So, the project fulfils the requirement of paragraph 303 of VVS for PA version 2.0 and project standard for PA para 242. Hence, the validation team accepts the changes reported in the revised PDD.

D.8. Changes specific to afforestation and reforestation project activities

Means of validation	N/A
Findings	N/A
Conclusion	N/A

SECTION E. Internal quality control

>>The final validation report has undergone a technical review and quality reviewer before being submitted to the project participant(s) and UNFCCC Executive Board. A technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification has performed the technical review.

SECTION F. Validation opinion

>> Carbon Check (India) Private Ltd. (CCIPL) has performed the validation of the prior approval tarck post-registration changes for the registered CDM Project Activity "Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia" having UNFCCC reference number 6488. During the validation of the post-registration changes to the project activity, change to the start date of crediting period, permanent deviation from regulatory document and design change from registered project activity has been identified. The post registration changes (PRC) to registered project activity has been validated in line with the requirements of PCP for project activities (version 02.0) /B02/, PS for project activities (version 02.0) /B03/ and VVS for project activities (version 02.0) /B01/.

CCIPL based on review of the revised PDD /**02**/ and interview with the PP confirms that the proposed ccorrections:

- Are an accurate reflection of actual project information; and/or
- Are in accordance with the applied methodologies, the registered monitoring plan.

CCIPL based on review of the revised PDD /**02**/ and interview with the PP confirms that the design change in the project design reported does not impact the following:

- The applicability and application of the applied methodology
- Compliance of the monitoring plan with the applied methodology
- The level of accuracy and completeness in the monitoring
- The additionality of the project activity
- The scale of the project activity

The proposed permanent changes are unlikely to lead to a reduction in the accuracy of the calculation of emission reductions. The version of the template of the PDD is updated to the latest version of template. This change was assessed to confirm that the revised PDD complies with the completing instructions of the CDM-PDD-FORM. The validation team can confirm that the post registration changes carried out to PDD is in accordance with the requirements of UNFCCC. The DOE therefore accepts the changes and request for the approval of 'change to the start date of crediting period' 'a permanent deviation from methodological

regulatory document' and 'design change'. The validation was performed on the basis of rules and requirements defined by UNFCCC for the CDM project activities. The review of the revised PDD /**02**/, supporting documentation and subsequent follow-up actions (including interviews), have provided CCIPL with sufficient evidence to determine the fulfilment of stated criteria. During the course of validation, one (01) CL was raised which is successfully closed by the PP. Carbon Check India Private Ltd. concludes the validation with a positive opinion that the Project Activity "Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia", meets all applicable requirements of UNFCCC for post-registration changes and therefore recommends for the approval of 'change to the start date of crediting period' 'a permanent deviation from methodological regulatory document' and 'design change' made to the PDD.

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH4	Methane
CL	Clarification Request
COD	Chemical Oxygen Demand
CO2	Carbon dioxide
CO2e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
kW	Kilo Watt
LoA	Letter of Approval
MoC	Modalities of Communication
MoV	Means of Verification
MR	Monitoring Report
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
POME	Palm Oil Mil Effluent
PP(s)	Project Participant(s)
RCP	Renewal of crediting period
Ref.	Document Reference
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Carbon Check (India) Private Ltd.

Champok Buragohain

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 Expert[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
24/12/2019

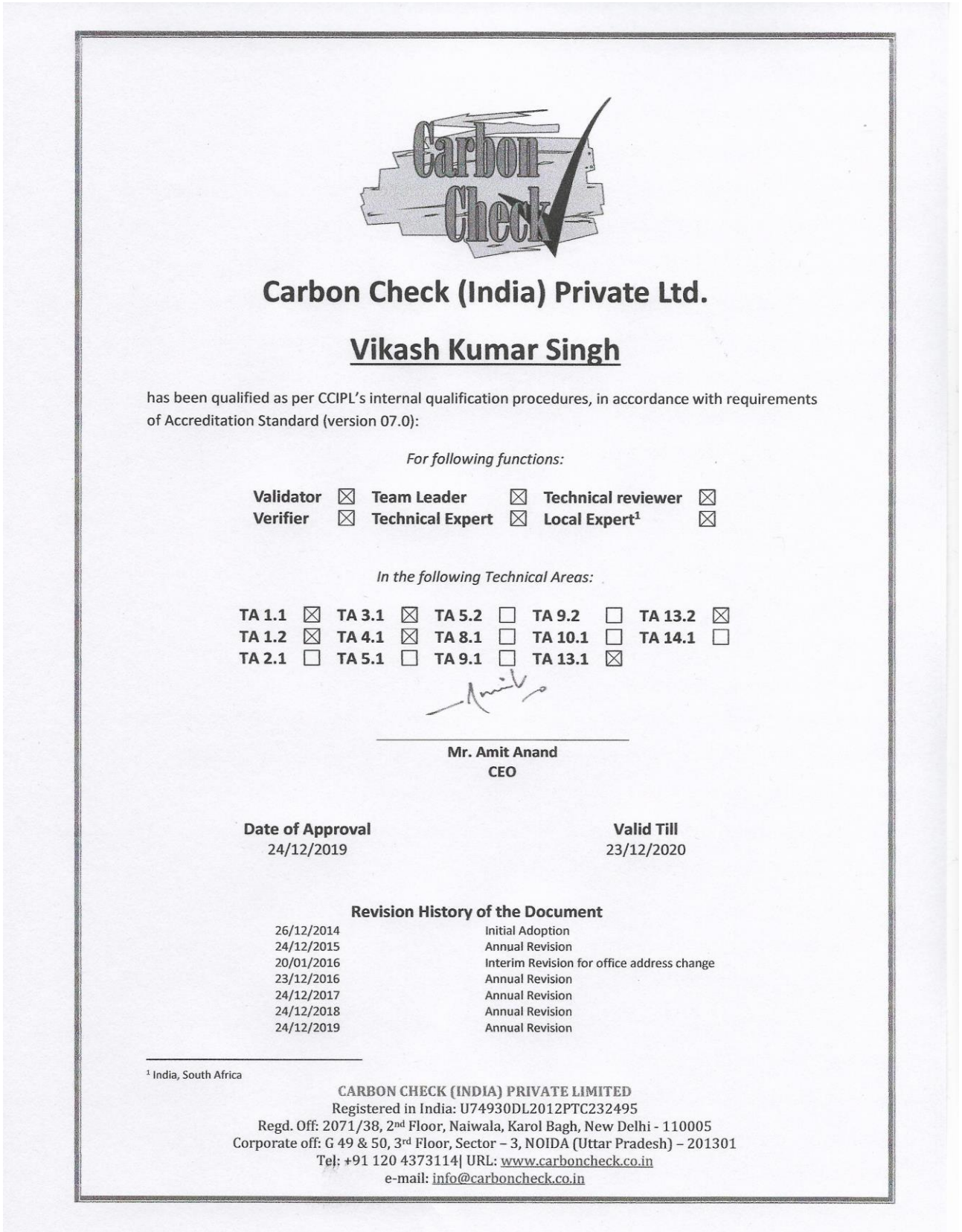
Valid Till
23/12/2020

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

[1] India

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector – 3, NOIDA (Uttar Pradesh) – 201301
Tel: +91 120 4373114| URL: www.carboncheck.co.in
e-mail: info@carboncheck.co.in



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 Expert[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	Valid Till
24/12/2019	23/12/2020

Revision History of the Document

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

[1] India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector – 3, NOIDA (Uttar Pradesh) – 201301
Tel: +91 120 4373114| URL: www.carboncheck.co.in
e-mail: info@carboncheck.co.in

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider

/01/	Perenia Pty Ltd.	Registered PDD for the project activity 'Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia'	Version 02.4 of 24/07/2012	PP
/02/	Perenia Pty Ltd.	Updared PDD for the project activity 'Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia'	Version 03 of 15/05/2020, version 3.1 of 19/06/2020	PP
/03/	SIRIM	Validation report for the project activity 'Methane Capture and Utilization Project at Melewar Palm Oil Mill, Malaysia'	Report No. SQAS-CDM-EP10850003, dated 27/09/2012	PP
/04/	Watermech Engineering Sdn. Bhd	Successful commissioning and handover report	Dated 24/06/2016	PP
/05/	Jarabumi Bergabung Sdn Bhd.	Invoice raised for 'Soil investigation work for proposed biogas plant'	Dated 17/08/2011	PP
/06/	Kong Wuii Keong Sdn.Bhd.	Invoice raised for 'Road surfacing work for the biogas plant'	Invoices from 23/07/2012 to 03/10/2013	PP
/07/	Syarikat Wing Contractor	Invoice raised for 'Piling works for the foundation of proposed bio-gas plant (Final stage work)'	Dated 29/05/2013	PP
/08/	Magtron Electrical Engineering Sdn.Bhd.	Invoice raised for Electric installation work for the biogas plant	Dated 25/06/2014	PP
/09/	KBK Engineering Sdn. Bhd.	Invoice raised for firefighting work for the biogas plant	Dated 31/03/2015	PP
/10/	Watermech Engineering Sdn. Bhd.	Final Invoice made on successful project commissioning	Invocie dated 22/12/2016	PP
/11/	Perenia Pty Ltd.	Updated emission reduction worksheet (301404_PRC_ex-ante ER_Melewar Mill Methane Recovery_WWT_MY)	Dated 19/06/2020	PP
/12/	Watermech Engineering Sdn. Bhd.	Pre-commissioning activity reports	01 October 2015 to 23 June 2016	PP
/B01/	UNFCCC	CDM Validation and Verification Standard for project activities	Version 02.0 of 29/11/2018	Others
/B02/	UNFCCC	CDM Project Cycle Procedure for project activities	Version 02.0 of 29/11/2018	Others
/B03/	UNFCCC	CDM Project Standard for project activities	Version 02.0 of 29/11/2018	Others
/B04/	UNFCCC	Project design document form	(CDM-PDD-FORM), version 11.0	Others
/B05/	Ministry of Science, Technology and Environment, Govt. of Malaysia	Environmental Quality (Prescribed Premises) (Crude Palm Oil) Regulations 1977		Others
/B06/	UNFCCC	AMS-III.H- Methane recovery in wastewater treatment	Ver. 16	Others

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CLs from this validation

CL ID	01	**Section no.**	D.4	**Date:** 21/05/2020
Description of CL				
PP is requested to calrify/submit the following details: *1. The commissioning record or any other record to justify the proposed start date of crediting period of the project activity.* *2. Please justify the additionality of the project as per para 236 (a) of CDM project standard version 2 and provided credible evidence for the same. The justification is not reflected in the updated PDD.* *3. Please justify in the updated PDD, whether the original baseline scenario established in the registered PDD remains valid.* *4. Demonstrate with credible evidence that substantial progress has been made by the project participant to start the project activity.* *5. PP is requested to clarify how the proposed change of removal of composting plant and utilise the sludge in land application shall be monitored to ensure aerobic condition is maintained in consistent with the methodology.*				
Project participant response				**Date:** 20/06/2020
1. Provided Commissioning Report [Att01] from Watermech Engineering SDN. BHD. for successful commissioning & handover of Biogas Power Generation Plant, dated 24 June 2016. *2. PP has revised the cashflow calculation spreadsheet [Att02] with actual value of decreased investment cost from RM 17,002,050.00 to RM 15,829,041 (based on Project Invoice Recap - Att03) to demonstrate that there was no significant increase in IRR without CDM, from -11.1% (base case) to -10.5% (actual value).* *3. There was no updated to regulation and policy. Only GWP value of methane is updated from 21 to 25 in keeping with second commitment of Kyoto Protocol as per paragraph 27 of CDM project standard for project activities (CDM-EB93-A04-STAN)).* *4. Provided Revised Project Implementation Schedule [Att04] published by Melewar SDN BHD. for Biogas plant and Desulphurization plant, started from October 2012 and finished June 2016 (was targeted in October 2014).* *5. According to measurement method and procedure of the "Sfinal,PJ,y" under AMS-III.H version 16.0, "If the methane emissions from anaerobic decay of the final sludge are to be neglected because the sludge is controlled combusted, disposed of in a landfill with methane recovery, or used for soil application, then the end-use of the final sludge will be monitored during the crediting period."* *Since the sludge utilization under the project activity will be applied to the soil, the emission would be neglected. Though the records of when sludge is removed, where the sludge is applied and its application to ensure aerobic condition will be kept. This record could ensure that the sludge will not be stored for longer periods so that there are no anaerobic conditions developed.*				
Documentation provided by project participant				
Att01 Melewar POME_COD_comment *Att02 20200617_Cash flow_Melewar_Ver2.0* *Att03 Melewar POME_Invoice recap* *Att04 revised Melewar - Biogas Plant Project Implementation Schedule*				
DOE assessment				**Date:** 26/06/2020
PP has submitted required documents and updated the PDD with appropriate justification in line with the requirements of paragraph 8.3.2 and paragraph 8.3.5 of CDM project standard version 2.0. Hence, CL is closed.				

Table 2. CARs from this validation

CAR ID	xx	**Section no.**		**Date:** DD/MM/YYYY
Description of CAR				
Project participant response				**Date:** DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				**Date:** DD/MM/YYYY

Table 3. FARs from this validation

FAR ID	xx	**Section no.**		**Date:** DD/MM/YYYY
Description of FAR				
Project participant response				**Date:** DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				**Date:** DD/MM/YYYY

- - - - -

Document information

Version	*Date*	*Description*
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM validation and verification standard for project activities" (CDM-EB93-A05-STAN); • Make editorial improvements.
02.0	31 October 2017	Revision to align with the requirements in the "CDM validation and verification standard for project activities" (version 01.0).
01.0	23 March 2015	Initial publication.

Decision Class: Regulatory
Document Type: Form
Business Function: Registration
Keywords: post-registration change, project activities, validation report