FINAL VALIDATION REPORT
for the CDM Programme of Activities

BWC Sustainable Biogas Recovery Programme of Activities in Indonesia

Report No. 01 997 9105070303-1/2

Version No. 1.1, 10-12-2012

Designated Operational Entity (DOE)

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I. Programme of Acitivities (PoA) Description:

PoA title:	BWC Sustainable Biogas Recovery Programme of Activities in Indonesia		Report No.: 01 997 9105070303-1/2
Host Country:	Indonesia		Current revision No.: 1.1
Methodology:	AMS-III.H Version 16 AMS-I.D Version 17	☐ Large Scale ☒ Small Scale	Date of current revision: - Date of first issue: 31-10-2012
Annual average emission reductions (estimate):			Not applicable to the PoA
GHG reducing measure/technology:	Methane recovery & electricity generation		

Party	Project Participants / CME	Party considered a project participant	Contract party
Indonesia (Host)	CME: PT Blue World Indonesia (BWC)	No	☐
Netherlands (Annex I)	PP: Blue World Carbon SEA Pte. Ltd	No	☒

II. Validation Team:

Validation Team			Role									
Full name	Affiliation TÜV Rheinland	Appointed for Sectoral Scopes (Technical Areas)	Team leader	Acting Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
Ms. Nelly Yong Tau Lan	Malaysia	1, 5, 11, 12, 13	X									
Mr. Azizan Zakaria	Malaysia	5, 11, 12, 13			X							
Ms. Carol Ng Siew Theng	Malaysia	15							X			
Dr. Lixin Li	China	1, 2, 3, 4								X		
Walter Tang	China	1, 2, 3, 4, 13									X	

Validation Phases and Validation Status:

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

III. Validation Report:

Final approval	Released	Distribution
☒ Date: 21-12-2012	By: Mr. Praveen Urs	☐ No distribution without permission from the Client or responsible organizational unit ☒ Unrestricted distribution

EXECUTIVE SUMMARY- VALIDATION OPINION

The validation team assigned by the DOE (TÜV Rheinland (China) Ltd.) has performed the validation of "BWC Sustainable Biogas Recovery Programme of Activities in Indonesia" on the basis of UNFCCC criteria for Clean Development Mechanism (CDM) programme of activities according to Article 12 of the Kyoto Protocol and the subsequent decisions by the COP/MOP and CDM Executive Board with regard to the simplified modalities and procedures for small-scale CDM project activities, the procedures for registration of a programme of activities and the application of approved methodologies. The validation findings are summarized in the validation report and the validation protocol.

The review of the Programme design documentations (i.e. PoA-DD, CPA-DD and real-case CPA-DD) and the subsequent follow-up interviews have provided the DOE with sufficient evidence to determine the fulfilment of stated criteria.

The chronological order of events for the validation activities conducted for this project as summarized as below:

No.	Validation Activities	Date
1	Public stakeholder comment process	25-05-2012 – 23-06-2012
2	Desk review of preliminary PoA-PDD (version 01, 22-05-2012)	30-05-2012 & 01-06-2012
3	On-site visit & interview of stakeholders	31-05-2012
4	Issue of draft validation protocol with corrective action requests (CARs) and clarification requests (CLs)	20-06-2012
7	Desk review of revised PoA-DD (version 05, 27-11-2012)	27-11-2012
8	Issue of the final validation report (upon receiving all supporting documents & evidences for report preparation by the validation team	10-12-2012

According to the web hosted PoA-DD, the programme is a bilateral PoA. The host country is Indonesia. The LoA from the Indonesia DNA (National Committee on CDM), has been received to confirm the voluntary participation of PT Blue World Indonesia in achieving sustainable development. Similarly, the LoA for confirming Netherlands as the project participant from the DNA of Netherlands (Ministry of Infrastructure and the Environment, International Affairs Directorate) has been received

The validation did not reveal that the proposed PoA receives public funding from several sources. Supporting information for the public funding /P11/ has been provided to the validation team

The CDM programme activities under the PoA had correctly applied the approved methodologies:

1) AMS-III.H Version 16 /B04/
2) AMS-I.D Version 17 /B04/

and the following methodology tools were applied:

1. Tool to determine project emissions from flaring gases containing methane /B22/
2. Tool to calculate baseline, project and/or leakage emissions from electricity consumption /B17/
3. Tool to calculate the emission factor for an electricity system /B05/
4. Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /B06/

It is demonstrated that the PoA is not a baseline scenario. In the absence of the PoA, the baseline scenario will remain unchanged. Emission reductions attributable to a programme activity included to the PoA are hence expected to be additional to any that would occur in the absence of the programme activity provided that the PoA meets the requirements for demonstrating additionality established in the PoA-DD.

Monitoring plan and procedures have been presented in the PoA-DD. Relevant CDM training is not yet started. Training plans and schedules about CDM monitoring and technical aspects are also not yet available at the time of onsite validation.

The validation protocol describes total of (28) findings which include:
(10) Corrective Action Requests for PoA (CARs)
10) Corrective Action Requests for Generic CPA (CARs)
(3) Clarification Requests (CLs) for PoA;
(2) Clarification Requests (CLs) for Generic CPA;
(0) Forward Action Requests (FARs); and all findings have been closed satisfactorily.

In summary, subject to further clarification from the project participant, it is the validation team's opinion that the PoA, "BWC Sustainable Biogas Recovery Programme of Activities in Indonesia", as described in the web hosted PoA-DD, CPA-DD and specific case CPA-DD, meets all the relevant UNFCCC requirements for a PoA under the CDM and relevant host country criteria, and correctly applies the baseline and monitoring methodology AMS-III.H Version 16 & AMS-I.D Version 17 as detailed in the report. The validation team therefore recommends the proposed programme activity to be registered as a CDM Programme of Activities with the UNFCCC

Ms. Nelly Yong Tau Lan (Team Leader)

TÜV Rheinland Malaysia Sdn. Bhd.
Selangor Darul Ehsan, 20-12-2012

Mr. Praveen Nagaraje Urs (DOE Manager)

TÜV Rheinland (China) Ltd.
Beijing, 21-12-2012

Abbreviations

AMS	Approved Methodology Small Scale
ACM	Approved consolidated baseline and monitoring methodology
BM	Build Margin
BOD	Board of Directors
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CH_4	Methane
CL	Request for Clarification
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COD	Chemical Oxygen Demand
DNA	Designated National Authority
DoE	Department of Environment
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
ERPA	Emission Reduction Purchase Agreement
FSR	Feasibility Study Report
GHG	Greenhouse Gases
GWP	Global Warming Potential
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
kWh	kilo Watt hours
LoA	Letter of Approval
MCF	Methane Correction Factor
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt Hours
NGO	Non-Governmental Organization
ODA	Official Development Assistance
OM	Operating Margin
PDD	Project Design Document
QA/ QC	Quality Assurance / Quality Control
t	Tonne
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

Blue World Carbon SEA Pte. Ltd has commissioned the DOE TÜV Rheinland China Ltd. to perform validation of the proposed CDM Programme of Activities (PoA) "BWC Sustainable Biogas Recovery Programme of Activities in Indonesia" (hereafter called "the PoA").
This report summarises the findings of the validation of the PoA identified in the PoA Design Document (PoA-DD); the CDM Programme Activity Design Document (CPA-DD) template with generic information relevant to all CDM Program Activities (CPAs) to be included in the PoA; and the associated real case CPA-DD. The validation was performed on the basis of UNFCCC criteria for the PoAs under the CDM, as well as criteria given to provide for consistent programme operations, monitoring and reporting. The term "UNFCCC criteria" refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project /programme activities, the procedures for registration of a programme of activities and the subsequent decisions by the COP/MOP and CDM Executive Board. In addition to these criteria, host country criteria are also taken into account.

1.1 Objective

The purpose of a validation is to have an independent third party assess the PoA-DD, CPA-DD template and the associated real case CPA-DD (also known as specific CPA-DD). In particular, the eligibility criteria for inclusion and demonstration of additionality of CPAs, the programme's baseline determination, monitoring plan, and the programme's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoAs and is seen as necessary to provide assurance to stakeholders of the quality of the programme and its intended generation of certified emission reductions (CERs).

1.2 Scope

The validation scope is defined as an independent and objective review of the PoA-DD, CPA-DD template and the real case CPA-DD. The PoA-DD, CPA-DD template and the real case CPA-DD were reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project/ programme activities and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-III.H Version 16 & AMS-I.D Version 17

The validation team has, based on the requirements contained in the CDM Validation and Verification Standard (Version 02.0), employed a rule-based approach, focusing on the identification of significant risks for programme implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the PoA Managing Entity, CPA Implementer(s) and/or project participant(s) (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the programme design.
While carrying out the validation, TRC determines if the project activity complies with the requirements of Para 37 of the CDM M&P and also assess the claims and assumptions made in the PDD without limitation on the information provided by the project participants.
The scope of the validation is:

- To apply TRC's own quality management system integrated with the VVS standard along with the recent decisions and guidance provided by the UNFCCC board to determine if the project activity meets all applicable CDM requirements, including those specified in the project standard, relevant methodologies, tools and guidelines and processing the same with CDM project cycle procedure;
- Asses the accuracy, conservativeness, relevance, completeness, consistency and transparency of the information provided by the project participants;
- Determine whether information provided by the project participants are reliable and credible;
- Present information in the form of validation report in a factual, neutral, coherent manner and document all assumptions, provide references to the background material and identify changes made to the documentation;

- Base the findings and conclusions on objective evidence and conduct all validation in accordance with CDM rules and procedures;
- Apply consistent validation criteria in providing expert judgments to the requirements of applicable approved methodologies, tools and also cross check the same with projects of similar characteristics, technology, time period and region; and
- Safeguard the confidentiality of all information's obtained or created during validation.
- Where sampling is involved, the standard for sampling and surveys are applied.

2 METHODOLOGY

The validation consists of the following four phases:

I A desk review of the project design documents
- Publication of PoA-DD & completed CPA-DD in UNFCCC for global stakeholder consultation;
- A review of data and information;
- Cross checking between information provided in PDD with all necessary means without limitations to the information provided by the project proponent;

II On-site visit and follow-up interviews with project stakeholders
- Interviews with relevant stakeholders in host country with personnel's 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's relating to projects or technologies similar projects under validation and review based on the approved methodology being applied of 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 following sections outline each step in more detail.

2.1 Desk Review of the Programme Design Documentation

Documents provided by the project participant(s):

/P01/	PoA-PDD [initially published version], Version 01, Date: 22-05-2012 Specific CPA-DD [initially published version], Version 01, Date: 22-05-2012
/P02/	PoA-PDD [final version], Version 05, Date: 27-11-2012 Specific CPA-DD [final published version], Version 05, Date: 27-11-2012
/P03/	Host Country Approval / Letter or Approval: Indonesia, DNA: National! Committee on CDM of the Republic of Indonesia Reference number : B 107/KNMPB|10|2012, Date: 29-10-2012
/P04/	Annex 1 Party Letter or Approval: Netherlands, DNA : NL Agency, Ministry of Infrastructure and the Environment Reference number : 2012ANL737, Date: 25-09-2012
/P05/	Modalities of Communication
/P06/	Financial Calculation Excel Spread sheet, undated
/P07/	Emission Reduction Calculation Excel Spread sheet, undated
/P08/	Feasibility Study Report dated May 2012, prepared by PT Saranacipta Saptapesona
/P09/	Declaration letter by CPA Implementer, PT Maris Sustainable Indonesia dated 25 May 2012
/P10/	Business licence – PT Blue World Indonesia Business licence – Blue World SEA Pte Ltd
/P11/	Declaration of no diversion of ODA by the CME, PT Blue World Indonesia dated 21 May 2012
/P12/	MenLH Decree 11/2006 "Business and/or activity type which require an Environmental Impact Assessment (EIA)"

/P13/	"The State Minister of Underdeveloped Zone Development Decree No. 001 issued in 2005 about National Strategy for Underdeveloped Zone Development, Ref. Number: 001/KEP/M-PDT/I/2005"
/P14/	"Roles and responsibilities & review of competences of personnel" procedure, QOP 04, Rev A, March 30, 2012
/P15/	Technical review procedure for CPA DD, QOP 01, Rev 02, dated April 23, 2012
/P16/	Double Counting Avoidance Procedure for CPA DD, QOP 02, Rev 02, April 23, 2012
/P17/	A record keeping system for each CPA under the PoA, QOP 03, Rev 02, March 30, 2012
/P18/	Staff training arrangement / planning, including staff training records, Rev 01, March 30, 2012
/P19/	Programme of Activities Management System Manual For Blue World Indonesia Version 03, dated 30-3-2012
/P20/	The State Ministry of Environment Decree no Kep-51/MENLH/10/1995 on the Wastewater Standard for Industrial Activities.

Background investigation and other referred documents/websites:

/B01/	Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3	
/B02/	/B02.1/	Programme design document form for small-scale CDM programmes of activities (CDM-SSC-PoA-DD), Version 02.0
	/B02.2/	Component project activity design document form for small-scale component project activities, Version 02.0
/B03/	Web sites referred *www.**ipcc**.ch (for referring Emission factors)* http://cdm.unfccc.int (for referring to applicable latest guidelines) CDM Pipeline list in http://cd4cdm.org/ website as 31 October 2012 http://www.indonesia.climatemps.com/	
/B04/	Approved Baseline & Monitoring Methodology: AMS-III.H, "Methane recovery in wastewater treatment", Version 16 AMS-I.D, "Grid connected renewable electricity generation", Version 17	
/B05/	Tool to calculate the emission factor for an electricity system, Version 02.2.1, EB63, Annex 19 Remarks: This tool version 02.2.1 is still valid at the time of validation finalization in December 2012 According to EB 70 report, Tool to calculate the emission factor for an electricity system (version 03.0.0) is now available However, according to EB 70 report (November 2012): Paragraph 60: *For all revised methodologies and tools that were approved by the Board at this meeting, the DOEs may upload for registration the PDDs of project activities in which the previous version of an approved methodology or an approved tool has been applied, not later than the calendar day (at 24:00 GMT) eight months from the publication date of this report, in accordance with paragraph 36 of the "Procedure for the submission and consideration of requests for revision of approved baseline and monitoring methodologies and tools for large-scale CDM project activities". Further information on the exact dates is available on the UNFCCC CDM website at <https://cdm.unfccc.int/methodologies/PAmethodologies/approved>.*	
/B06/	Tool to calculate project or leakage CO2 emissions from fossil fuel combustion", Version 02, EB 41, Annex 11	
/B07/	Glossary of CDM Terms Version 07.0	

/B08/	Guidelines On The Assessment Of Investment Analysis Version 05, EB 62, Annex 5
/B09/	Tool to determine the remaining lifetime of equipment, Version 01 EB50
/B10/	Guidelines For The Reporting And Validation of Plant Load Factors, Version 01, EB 48, Annex 11
/B11/	Guidelines On The Demonstration And Assessment Of Prior Consideration Of The CDM, Version 04, EB 62, Annex 13
/B12/	General Guidelines to SSC CDM methodologies, Version 19.0, EB 69, Annex 27
/B13/	Guideline on Assessment of Debundling For SSC Project Activities, Version 03, EB 54, Annex 13
/B14/	Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5
/B15/	Clean Development Mechanism Project Cycle Procedure, Version 03.1, EB 70, Annex 4
/B16/	Clean Development Mechanism Project Standard, Version 02.1, EB 70, Annex 2
/B17/	Tool to calculate baseline, project and/or leakage emissions from electricity consumption, Version 01, EB 39, Annex 7
/B18/	Guidelines for demonstrating additionality of microscale project activities Version 04.0, EB 68, Annex 26 *Remarks: At the time of validation finalization in December 2012 for the PoA-DD, Generic CPA-DD & Specific CPA-DD webhosting, this guideline is now applicable & the previous version is no longer applicable - see Item B21 below*
/B19/	Attachment A of Appendix B, Version 08, Annex 24 *Remarks: At the time of on-site validation & PoA-DD, Generic CPA-DD & Specific CPA-DD webhosting, this standard is still valid until before EB68. However at the time of validation finalization which is in December 2012, this guideline is no longer valid & hence the latest guideline has been applied – see Item B20 below*
/B20/	Guidelines on the Demonstration of Additionality of Small-Scale Project Activities, Version 09.0, EB 68, Annex 27 *Remarks: At the time of validation finalization in December 2012 for the PoA-DD, Generic CPA-DD & Specific CPA-DD webhosting, this guideline is now applicable & the previous version is no longer applicable - see Item B19 above*
/B21/	Guidelines For Demonstrating Additionality Of Microscale Projects Activities, Version 03, EB 63, Annex 23 *Remarks: At the time of on-site validation & PoA-DD, Generic CPA-DD & Specific CPA-DD webhosting, this standard is still valid until before EB68. However at the time of validation finalization which is in December 2012, this guideline is no longer valid & hence the latest guideline has been applied – see Item B18 above*
/B22/	Tool to determine project emissions from flaring gases containing methane, EB 28, Annex 13 Remarks: This tool version 02.2.1 is still valid at the time of validation finalization in December 2012 According to EB 68 report, "Project emissions from flaring" (version 02.0.0) is now available However, according to EB 68 report (July 2012): Paragraph 92: *For all revised methodologies and tools that were approved by the Board at this meeting, the DOEs may upload not later than 20 March 2013 (24:00 GMT) for registration the PDDs of project activities in which the previous version of an approved methodology or an approved tool has been applied, in accordance with paragraph 36 of the "Procedure for the submission and consideration of requests for revision of approved baseline and monitoring methodologies and tools for large-scale CDM project activities".*

2.2 Follow-up Interviews with Programme Stakeholders [1]

The following table identifies the personnel who have been interviewed and/or provided additional information to the presented documentation:

	Date	Name	Organization	Topic
/I01/	30-5-2012	Nicholas Simanjuntak	Blue World Carbon SEA Pte Ltd	▪ Management interview - CME ▪ Programme description (by the CME) & discussion on the stated goal & policy, voluntary action; general operating & implementing framework of PoA Review of PoA-DD, CPA-DD template, CPA-DD Case 1 ▪ Project technology description ▪ Baseline determination for a typical CPA & real case CPA of the PoA ▪ Applicability of applied baseline & monitoring technology ▪ Eligibility criteria & inclusion of a typical CPA & real case CPA of the PoA ▪ Additionality justification on PoA level & on typical CPA level including the real case CPA ▪ Monitoring plan assessment (including monitoring equipment, monitoring plan & data recording system / database, record keeping) ▪ Calculation information check & confirmation of baseline emissions & ER amount ▪ Local stakeholder consultation (both on PoA level & real case CPA) ▪ EIA done at CPA level including statutory clearances required for the implementation of CPA ▪ Double counting & de-bundling check ▪ Spread sheets review ▪ Document review
		Ywert Visser	Blue World Carbon SEA Pte Ltd	
/I02/	31-5-2012	Nicholas Simanjuntak	Blue World Carbon SEA Pte Ltd	Plant tour ▪ Confirmation of site location ▪ Facility check ▪ Project design & process flow ▪ Project boundary ▪ Technology used ▪ Environmental & social impacts ▪ Review of mill records
		Ywert Visser	Blue World Carbon SEA Pte Ltd	
		Ichsan	PT Maris Sustainable	

[1] The validation team carried out the desk review discussion & site visit on 30 – 31 May 2012 & 1 June 2012 prior to the date of GSP closure (GSP period is from 25 May 12 - 23 Jun 12). Considering the validation work is carried out during the public stakeholder comment process, it is possible to receive comments from global stakeholders and the response from project participant for received comments should be validated during follow-up interviews. Thus the validation team has obtained confirmation from the project participant to confirm that in case of any negative comments arise and some or all of them were not addressed during site visit, the validation team would go for a second site visit. As a result, there are no comments during GSP.

			Indonesia	▪ Interview with representative of local villagers for public consultation. ▪ Interview with representative of local villagers living nearby the project site ▪ Representative of local government to interview about local regulations for land acquisition / environment Continue document & desk review ▪ Project technology review ▪ Monitoring plan discussion ▪ Baseline data ▪ Regulatory compliance (waste water discharge, land application. mill operation, projection plan for FFB processing versus baseline lagoon capacity)
		Yessi Plofesi	PTPN VII	
		Hendri Afrizal	PTPN VII	
		Franklin J. Nainggolan	PTPN VII	
		Budi Dermawan	PT Maris Sustainable Indonesia	
		Juraliman	Laboratory Head	
		Purmanto	Kep Bumi Jaya	
		Lilik Nuryanto	Kep. Sinar Banten (Head of village)	
/I03/	1-6-2012	Nicholas Simanjuntak	Blue World Carbon SEA Pte Ltd	▪ Continue of desk review
		Ywert Visser	Blue World Carbon SEA Pte Ltd	

2.3 Resolution of Outstanding Issues

The objective of this phase of the validation is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which need be clarified prior to TÜV Rheinland's positive conclusion on the project design. In order to ensure transparency a validation protocol is customized for the project. The protocol shows in transparent manner criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is expected to meet CDM requirements;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.
- It ensures that the issues are accurately identified, formulated, discussed and concluded in the validation report.
- It ensures the determination of achieving credible emission reductions from the project activity.

The validation protocol consists of 5 tables. The different columns in these tables are described in the figure below. The completed validation protocol for this project is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of project objectives is identified. Corrective action requests (CAR) are issued, where:

- Mistakes have been made with a direct influence the ability of the project activity to achieve on project results like real, measurable, verifiable and additional emission reductions;
- CDM and/or methodology specific requirements have not been met; or
- There is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

A request for clarification (CL) may be used where additional information is needed to fully clarify an issue.

A forward action request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

Validation Protocol Table 1: Requirement checklist for PoA DD				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the programme should meet. The checklist is organised in different sections, following the logic of the small-scale PoA-DD templates, version 01. Each section is then further sub-divided.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **corrective action request (CAR)** due to non-compliance with the checklist question (See below). A request for **clarification (CL)** is used when the validation team has identified a need for further clarification.

Validation Protocol Table 2: Requirement checklist for g-CPA DD				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements in Table 2 are linked to checklist questions the programme should meet. The checklist is organised in different sections, following the logic of the small-scale g-CPA-DD templates, version 01. Each section is then further sub-divided.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **corrective action request (CAR)** due to non-compliance with the checklist question (See below). A request for **clarification (CL)** is used when the validation team has identified a need for further clarification.

Validation Protocol Table 3 and 4: Resolution of Corrective Action and Clarification Requests on the PoA DD and g-CPA DD respectively.				
CL/ CAR No.	**Observations**	**Reference**	**Summary of project owner response**	**Validation team conclusion**
CL/ CAR XX	If the conclusions from the draft Validation are either a CAR or a CL, these should be listed in this section.	Reference to the checklist question number in Table 1and 2 where the CAR or CL is explained.	The responses given by the project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1 and 2, under "Final Conclusion".

Validation Protocol Table 5: List of forward action requests (FARs)				
FAR Number	**Observations**	**Reference**	**Summary of project owner response**	**Validation team conclusion**
FAR-XX	If the conclusions from the draft Validation are FARs, these should be listed in this section.	Reference to the checklist question number in Table 1 where the FAR is explained.	The responses given by the project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final Conclusion".

Figure 1. Validation protocol tables

2.4 Internal Quality Control

The validation report including the validation findings underwent a technical review. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for CDM validation and verification.

2.5 Validation Team

Before the assessment begins, members of the validation team are ensured to cover the technical area(s), sectoral scope(s) and relevant host country experience including local language ability for evaluating the CDM project activity. The qualification of the team is as per the criteria defined by the EB guidelines for qualification.

Validation Team			Type of Involvement						
Full name	**Affiliation TÜV Rheinland**	**Appointed for Sectoral Scopes (Technical Areas)**	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Technical Reviewer
Ms. Nelly Yong Tau Lan	Malaysia	1, 5, 11, 12, 13	X	X		X			
Mr. Azizan Zakaria	Malaysia	5, 11, 12, 13		X	X	X			
Ms. Carol Ng Siew Theng	Malaysia	15		X	X	X			
Dr. Lixin Li	China	1, 2, 3, 4							X
Walter Tang	China	1, 2, 3, 4, 13					X		

3 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the programme design as documented and described in the PoA-DD and g-CPA-DD.

3.1 Approval and participation

Validation Opinion:

VVS paragraph 38 to 61, 186

According to the PoA-DD, the proposed programme is a bilateral CDM PoA which involves 2 project participants: PT Blue World Indonesia from Indonesia which is the host party and Blue World Carbon SEA Pte Ltd which is from the Annex 1 country.

PT Blue World Indonesia acts as the coordinating / managing entity of the SSC-PoA. The host party, i.e. Indonesia meets all relevant participation requirements in CDM.

According to Section A.7 of the PoA-DD and the on-site interview with the representative from PT Blue World Indonesia, there is no public funding will be received. A declaration letter from CME, PT Blue World Indonesia dated 21 May 2012 /P11/ confirming there is no public funding received from Annex 1 country

Table 4: The below table summarizes the project participant and party involved.

Project participants	PT Blue World Indonesia	Blue World Carbon SEA Pte Ltd
Parties involved	Indonesia (Host)	Netherlands (Annex I)
APPROVAL	National! Committee on CDM of the Republic of Indonesia	NL Agency, Ministry of Infrastructure and the Environment
LoA received	Yes	Yes
Date of LoA	29-10-2012	25-09-2012
Reference to document	B 107/KNMPB|10|2012	2012ANL737
LoA received from	PP	PP
Validation of authenticity	The received original copy of the LoAs from the project participants were compared with LoA of those registered CDM projects which have the same DNA. The LoAs were compared on the alignment, the standard format and signatory of the person who issued the letter & confirmed to be same. The validation team has confirmed these LoAs are authentic. The letter(s) of approval was also found to be unconditional with respect to paragraph 39 (a) to (d) of Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3 /B01/. The validation team concluded that these letter(s) are in accordance with paragraphs 39 - 42 of Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3 /B01/	
Validity of LoA	Not specified	Not specified
PARTICIPATION		
Party is party to Kyoto Protocol	Yes, ratified since 3 December 2004	Yes, ratified since 31 May 2002

Voluntary participation	Yes	Yes
Diversion of official development aid towards host country	N/A	No
Programme contribution to SD	Yes	N/A

Confirmation of MoC

The project MoC /P05/, has been received from the CME. The validation team has confirmed that the authorized signatories in the MoC are the same as in the LoAs /P03, P04/ for host & Annex 1 party respectively. The name of the contact person mentioned in the MoC is also consistent with the final PDDs /P02/.

3.1 Programme of Activities Design Documents

Validation Opinion:

VVS paragraph 62, 63

The validation team validated that the provided PoA-DD /P01/ and CPA-DD /P02/ and completed CPA-DD /3/ are based on the currently valid PoA-DD template /B02/ and CPA-DD template /B02/.

3.3 Programme Description

Validation Opinion:

VVS paragraph 64 to 69, 189

The objective of the "BWC Sustainable Biogas Recovery Programme of Activities in Indonesia" is to promote the introduction of wastewater treatment technologies that are less Green House Gas (GHG) emission intensive at agro-industrial facilities. CPA under the PoA is only eligible for inclusion if their purpose is to treat biogenic organic wastewater and if their industry is listed in The State Ministry of Environment Decree no Kep-51/MENLH/10/1995 on the Wastewater Standard for Industrial Activities. As described in the PoA-DD as well, each small-scale CDM Program Activity (referred to later on as "CPA") under this PoA will comprise methane (biogas) recovery system(s) (referred to later on as "biogas plant") and result in aggregate emissions reductions of less than or equal to 60 kt CO2 equivalent annually, the threshold for type III ("other project activities") CDM projects.

The CPA may also utilize the biogas as fuel to produce electricity that displaces more emission intensive electricity production in the grid.

The validation team performed research on the website & found as follows:

According to Frost & Sullivan Indonesia 2012 Indonesia Power Sector Outlook by Frost & Sullivan on Apr 26, 2012:
(http://www.slideshare.net/FrostandSullivan/indonesia-2012-indonesia-power-sector-outlook#btnNext)

In the Market Outlook Segment - Renewable Energy Mix, "*wind, solar and biogas is not yet connected to main grid and each capacity is below 2% of total national RE (Renewable Energy) capacity as it is in early stage of development*".

It was further mentioned that "*biogas technology has been developed for quite sometime but subjected to more waste control rather than electricity generators. Electricity projects are mostly localized small capacity projects for own usage and not yet connected to main national grid.*"

Hence, the validation team could confirm that utilization of biogas for electricity in the country are rather negligible since they are not connected yet to the main grid.

Based on the document review & validation team's local experience & familiarity with the Indonesian regulations including local expert confirmation, the validation team could confirm that there are no mandatory regulations on the development of such projects in Indonesia, including development of the same as PoA.

The validation team was also able to confirm that in the absence of the CDM, the current regulations in Indonesia would not be changed & the CPA under PoA would face the investment barrier and that the PoA implementation would contribute towards sustainable development in Indonesia

The location of the PoA is in Indonesia. According to the PoA-DD, the database of all plants would be maintained by CME.

According to the PoA-DD, a typical CPA (that will be included in this PoA) will involve the installation of an anaerobic digester with methane recovery and may include one or more individual project sites at agro-industrial facilities in Indonesia. The technology employed will be appropriate to the site it is implemented. Any anaerobic digester technology is allowed (e.g. UASB, covered lagoon, etc.), provided it can comply with the requirements set out by CME in the eligibility criteria. Measures can be implemented at existing or Greenfield facilities.
The measures may be implemented at Greenfield or new facilities by one or more CPA implementers. CPA that utilizes biogas for the production of power can (when meeting the applicability criteria of the applied methodology) claim emission reductions for the displacement of electricity.
The following scenarios have been defined in the PoA-DD as eligible for inclusion under the PoA:

Project Scenario	Description of scenario
1	Biogas plants installed at new (Greenfield) facilities
2	Biogas plants installed at existing facilities
E	Utilization of biogas for power generation (in combination with scenario 1 or 2)

It is also stated in the PoA-DD that CPA under the PoA are only eligible for inclusion if their purpose is to treat biogenic organic wastewater and if their industry is listed in The State Ministry of Environment Decree no Kep-51/MENLH/10/1995 on the Wastewater Standard for Industrial Activities /P20/. The validation team reviewed this document & confirmed the same

For the technology or measures to be employed by each CPA, the validation team had confirmed that the followings are to be implemented:

The project activity in a CPA of this PoA may include one or more of the following technology measures:

a) Substitution of aerobic wastewater treatment systems with anaerobic systems with biogas recovery and combustion;
b) Introduction of biogas recovery and combustion to an anaerobic wastewater treatment system such as anaerobic reactor, lagoon, septic tank or an on-site industrial plant;
c) Introduction of a sequential stage of wastewater treatment with biogas recovery and combustion, without sludge treatment, to an anaerobic wastewater treatment system without biogas recovery (e.g. introduction of treatment in an anaerobic reactor with biogas recovery as a sequential treatment step for the wastewater that is presently being treated in an anaerobic lagoon without methane recovery).

According to the PoA-DD, the starting date of the PoA is 25/05/2012. The stating date is determined as the date on which the PoA was published for Global Stakeholder Consultation on the website of the UNFCCC. The length of the PoA is taken as 28 years.

Herewith, the validation team summarizes ***major*** changes between webhosted PoA-DD and final version of PoA-DD for submission as follows:

Subject	**Webhosted PoA-DD**	**Correction to webhosted PoA-DD in the final PoA-DD submission for registration with DOE assessment and reason of acceptance.**
PoA-DD (project title / participants involved/ project location /project technology etc.)	BWC Sustainable Biogas Recovery Programme of Activities in Indonesia	Remains unchanged

Methodologies and tools applied (scope and version numbers)	1) AMS-III.H Version 16 /B04/ 2) AMS-I.D Version 17 /B04/	Remains unchanged
CER calculations (formula applied / amount of emission reduction)	Formulae applied consistent with AMS-III.H Version 16 /B04/ & AMS-I.D Version 17 /B04/ The CER amount calculation is demonstrated at specific CPA-DD level	Remains unchanged
Additionality: (benchmark / input values / analysis type / project start date / IRR or NPV values etc.)	Demonstrated & defined as one of the eligibility criteria, as follows: Additionality for the CPAs is demonstrated by applying one of the two options as following: Approach A: In the cases where the emission reductions resulting from the methane recovery activity (i.e. Type III component) is at a scale of no more than 20 ktCO2e per year, the CPA implementer may demonstrate the additionality of the CPA as per the "Guidelines for demonstrating additionality of microscale project activity", version 03, Annex 23 of EB 63 /B21/; Approach B: For CPAs as small scale project activities: According to the "Attachment A of Appendix B", version 08, Annex 24 of EB 63 /B19/, demonstrate the presence of investment barrier that would prevent the implementation of the proposed CPAs. Benchmark value / Financial indicator , IRR / CPA Start Date = defined specifically in specific CPA-DD	Additionality approach remains unchanged But the guidelines have been updated to reflect the latest update as follows **Guidelines for demonstrating additionality of microscale project activities Version 04.0, EB 68, Annex 26 /B18/** *Remarks: At the time of validation finalization in December 2012 for the PoA-DD, Generic CPA-DD & Specific CPA-DD webhosting, this guideline is now applicable & the previous version is no longer applicable i.e.* Guidelines for demonstrating additionality of microscale project activity", version 03, Annex 23 of EB 63 /B21/ **Guidelines on the Demonstration of Additionality of Small-Scale Project Activities, Version 09.0, EB 68, Annex 27 /B19/** *Remarks: At the time of validation finalization in December 2012 for the PoA-DD, Generic CPA-DD & Specific CPA-DD webhosting, this guideline is now applicable & the previous version is no longer applicable i.e.* "Attachment A of Appendix B", version 08, Annex 24 of EB 63 /B19/
Monitoring (parameters / frequency)	Listed monitoring parameters in PoA-DD Section B.7.1, Part II (Generic CPA-DD) according to AMS-III.H Version 16 /B04/ & AMS-I.D Version 17 /B04/, however several inconsistencies / missing parameters detected during validation	Listed monitoring parameters in PoA-DD Section B.7.1, Part II (Generic CPA-DD) are consistent according to AMS-III.H Version 16 /B04/ & AMS-I.D Version 17 /B04/
Crediting period (type / start date)	This is defined in the Specific CPA-DD Section A.9.1 In PoA-DD, no specific section available to indicate the crediting period, however the CME had defined in PoA-DD Section D.1 as follows: The starting date of the PoA is 01/09/2012 or the registration date,	The starting date of the PoA is 25/05/2012. The stating date is determined as the date on which the PoA was published for Global Stakeholder Consultation on the website of the UNFCCC

	whichever is later. The starting date is determined as the start of the crediting period	
Please refer to Appendix A of this report for details of each change between webhosted PoA-DD and the final PoA-DD for submission. The Validation Team has carried out the validation process based on the Webhosted PoA-DD and raised CARs/CLs against the project by issuing the validation protocol. With the updated information and corrections done on final PoA-DD, the PP has addressed all the CARs /CLs that were raised by the Validation Team. It is concluded that the Validation Team has reviewed the project in line with the VVS (version 02.0) and all the evidence, corrections, justifications and updating done on the final PoA-DD with respect to CARs /CLs raised are accepted and closed by the Validation Team, issuing the positive validation opinion for project registration.		

The validation team has confirmed that the project description of the project contained in the PoA-DD of BWC Sustainable Biogas Recovery Programme of Activities in Indonesia to be complete and accurate. The PoA-DD of BWC Sustainable Biogas Recovery Programme of Activities in Indonesia has complied with the relevant methodology, tools, forms and guidance at the time of PoA-DD submission for registration

3.4 Eligibility Criteria for CPA Inclusion

Validation Opinion:

VVS paragraph 187, 188, 196

According to VVS paragraph 196, the DOE shall assess the eligibility criteria for inclusion of a CPA in the PoA in accordance with the “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” /B14/.

Remarks: As described in the PoA-DD,
The following scenarios have been defined in the PoA-DD as eligible for inclusion under the PoA:

Project Scenario	Description of scenario
1	Biogas plants installed at new (Greenfield) facilities
2	Biogas plants installed at existing facilities
E	Utilization of biogas for power generation (in combination with scenario 1 or 2)

The following are the summary of the validation team’s opinion for the eligibility criteria assessed in the PoA-DD

Eligibility Criteria No.	Eligibility Criteria	Documentation to substantiate compliance (defined at Generic CPA-DD)	Validation opinion – PoA-DD level
A.	The CPA shall be located within the geographical territory of Indonesia.	One of the following documents shall be provided: ☐ Declaration from the CPA implementer confirm that the boundary of the implemented CPA is within the geographical territory of Indonesia and including information regarding geographic reference (latitude and longitude), name and address of the CPA. ☐ Business license of the CPA implementer issued by	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (a) The CME has already indicated that the geographic boundary of a CPA is within Indonesia, consistent to the PoA geographic boundary

		Indonesian local authorities.	
B.	The CPA implementer has signed a valid contractual agreement with the CME which permits its participation and inclusion in the PoA. Furthermore, the CPA implementer has signed an undertaking/declaration to declare that it is aware of the duties and responsibilities of a CPA implementer and the acceptance of the terms and conditions of the PoA. This contract and declaration are one of the measures to avoid double counting as it would contain the name and full details of CPA implementer at the same time, the agreement/undertaking by the CPA implementer is stating that the CPA is only a part of this PoA and shall not be subscribed as a stand-alone project or part of any other PoA.	The following document shall be provided: ☐ Contractual agreement between CME and CPA implementer. ☐ Declaration from the CPA Implementer to declare that it is aware of the duties and responsibilities of a CPA implementer and the acceptance of the terms and conditions of the PoA.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (b)
C.	The CPA must demonstrate that the participation of the CPA is voluntary and there is no requirement or enforcement under existing national/state/local regulations to introduce anaerobic digester equipped with methane recovery system.	The following document shall be provided: ☐ Declaration from the CPA Implementer regarding voluntary implementation of the wastewater treatment technology and confirmation that there is no requirement or enforcement under existing national/state/local regulations to introduce anaerobic digester equipped with methane recovery system. And: ☐ Confirmation in the CPA-DD regarding voluntary implementation by CPA implementer of the wastewater treatment technology and confirmation that there is no requirement or enforcement under existing national/state/local regulations to introduce anaerobic digester equipped with methane recovery system.	Yes, this is in line with the requirement defined in the Clean Development Mechanism Project Standard, Version 02.1, EB 70, Annex 2 /B16/, paragraph 140

D.	The CPA shall confirm to one of project scenarios as described in section A.2 of the PoA-DD	The following document shall be provided: ☐ Confirmation by the CME regarding the applicable project scenario for the CPA. Any of the following documents shall be provided: ☐ Purchase order of equipment ☐ Feasibility Study / Technical Proposal of the project that describes the project technology.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (c)
E.	The start date of the CPA shall not be before the commencement of validation of the PoA as a whole (date the PoA was published for global stakeholders comment)	One of the following documents shall be provided: ☐ In case available, the earliest signed equipment or (sub) contractor agreement with a total contract value that is significant to the project activity (the date of signing the purchase order by CPA Implementer shall constitute the starting date of the CPA). ☐ Declaration of from the CPA Implementer that no contracts have been signed with a total contract value that is significant to the project activity	
F.	The CPA shall meet the applicability and other requirements of the methodology AMS.III.H Version 16.	As described in section E.2 of the PoA-DD the CPA shall meet all relevant requirements of the methodology and the required evidence documentation shall be provided to the DOE at the time of inclusion.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (e)
G.	Demonstration of additionality as described in section B.5 of the PoA-DD in line with paragraph 7 and 9 of annex 05, EB 70. Additionality for the CPAs is demonstrated by applying one of the two options as following: Approach 1: In case the CPAs falling into Microscale projects (up	Any of the following documents at CPA level shall be provided: ☐ In case the CPAs falling into Microscale projects (up to 5 MW): Documentation to support the conditions satisfied based on “Guidelines for demonstrating additionality of microscale project activity”, version 04, Annex 26 of EB 68; or	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (f)

	to 5 MW): Documentation to support the conditions satisfied based on "Guidelines for demonstrating additionality of microscale project activity", version 04, Annex 26 of EB 68; Approach 2: For CPAs as small scale project activities: evidences that at least one of the barriers described in the section B.5 (according to the "Guidelines on the demonstration of additionality of small-scale project activities", Version 09.0 annex 27, EB 68 or the latest version at the time of inclusion) would prevent the implementation of the proposed CPAs.	For CPAs as small scale project activities: ☐ Evidences that at least one of the barriers described in the section B.5 (according to the "Guidelines on the demonstration of additionality of small-scale project activities", Version 09.0 annex 27, EB 68 or the latest version at the time of inclusion) would prevent the implementation of the proposed CPAs. CPA shall provide all relevant documents to substantiate the barrier analysis put forth in section B.5 of the PoA-DD to DOE at time of inclusion.	
H.	The CPA shall conduct an Environmental Analysis (if mandated by law) at CPA level. This shall be carried out prior to the inclusion.	The following document shall be provided: If law / regulations mandate environmental analysis: ☐ Copy of environmental analysis report. If there is no law / regulation to mandate environmental analysis: ☐ Declaration from CPA implementer regarding applicable laws for the CPA and explanation why environmental analysis is not required.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (g)
I.	CPA of the PoA shall be within the threshold (i.e. emission reduction of less than or equal to 60 kilotons of CO2 equivalent annually) as per the §14 of applied Baseline and Monitoring Methodology AMS III.H version 16.	The CPA implementer and CME shall consider this condition in the CPA DD and Emission reduction spread sheet.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (k)
J.	Confirmation that the CPA is not registered or being registered as a stand-alone CDM project outside of this PoA, a bundled CDM Project Activity or another	The following document shall be provided: ☐ Declaration from the CPA Implementer confirming that the project is not registered or in the process of being	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple

	registered PoA. The CPA shall not lead to double counting of emission reductions.	registered as a stand-alone CDM project, outside of the PoA, a bundled CDM Project Activity or another registered PoA. And: ☐ Confirmation described in the CPA-DD that states that the project is not registered or in the process of being registered as a stand-alone CDM project, outside of the PoA. ☐ Confirmation check by reviewing the website of the UNFCCC.	Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (b)
K.	Confirmation that the CPA is not a de-bundled component of another large-scale CPA or CDM project activity as per latest guidance given by the CDM Executive Board	The following document shall be provided: ☐ Declaration from the CPA Implementer confirming that the CPA is not a de-bundled component of another large-scale CPA or CDM project activity as per latest guidance given by the CDM Executive Board. And: ☐ Confirmation that the CPA is not a de-bundled component of another large-scale CPA or CDM project activity as per latest guidance given by the CDM Executive Board shall be provided in the CPA-DD.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (l)
L.	Confirmation on involvement of public funding or ODA from Annex I Parties in CPA	The following document shall be provided: ☐ Declaration from the CPA Implementer regarding the no involvement of public funding or ODA from Annex I Parties. And: ☐ Confirmation in the CPA-DD regarding no involvement of public funding or ODA from Annex I Parties.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (h)
M.	A CPA level local stakeholder's consultation has to be carried out prior to inclusion.	The following document shall be provided: ☐ Meeting minutes of the stakeholder consultation.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple

			Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (g)
N.	The CPA implementer shall be duly registered by the Indonesian authorities prior to inclusion	The following document shall be provided: ☐ Business license of the CPA Implementer issued by Indonesian local authorities.	Yes, this is in line with the host country requirement & business license of the CPA Implementer issued by the Indonesia local authorities is considered to be valid & accepted by the validation team
O.	The CPA shall be in conformance to statutory requirements of Indonesia.	The following document shall be provided: ☐ Business license of the CPA Implementer issued by Indonesian local authorities.	Same as Item N above
P.	Confirmation on the crediting period of the CPA which shall not exceed the length of the PoA (28 years) regardless of the time of inclusion of CPA in the PoA	Confirmation described in the CPA-DD that states that the crediting period of the CPA shall not exceed the length of the PoA.	Yes, this is in line with the requirement defined in the Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3 /B01/ paragraph 197 & Clean Development Mechanism Project Standard, Version 02.1, EB 70, Annex 2 /B16/ paragraph 160
Q.	The CPA shall not involve biomass storage under anaerobic conditions.	The following document shall be provided: ☐ Declaration from the CPA Implementer that the CPA does not involve biomass storage under anaerobic conditions.	Yes, this is appropriate since the CPA to be included will not involve any biomass storage

The CME also had defined additional eligibility criteria applicable for CPA that also apply scenario E
CPA that only apply scenario 1 or 2 do not need to comply with the below mentioned additional criteria.

Eligibility Criteria No.	Eligibility Criteria	Documentation to substantiate compliance (defined at Generic CPA-DD)	Validation opinion – PoA-DD level
R.	CPA of the PoA shall be within the threshold (i.e. combined installed electricity generation capacity less than or equal to 15 MW) the limit for small-scale project activities	Any of the following documents shall be provided: ☐ Feasibility Study / Project Proposal of the project that describes the project technology.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (k)

S.	The CPA shall meet the applicability and other requirements of the methodology AMS.I.D Version 17.	As described in section E.2 of the PoA-DD the CPA shall meet all relevant requirements of the methodology and the required evidence documentation shall be provided to the DOE at the time of inclusion.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (e)
T.	The plant must be connected to an Indonesian Electricity Grid.	Any of the following documents shall be provided: ☐ Feasibility Study / Project Proposal of the project that describes the project technology. ☐ Power Purchase Agreement.	Yes, this is in line with the requirement defined in the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/, paragraph 16 (i)

Conclusion:
In line with the following paragraphs from the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/ for **development of eligibility criteria**, the validation team concluded that:

- **Paragraph 13 & 14:**
  The CME has effectively developed the eligibility criteria for CPA inclusion under PoA according to the listed eligibility criteria in EB 70, Annex 5 (paragraph 16) & has included the eligibility criteria in the PoA-DD. The CME has positively demonstrated the usability of the eligibility criteria to assess the inclusion of the CPA (i.e. CPA 1.1 – Maris – PTPN VII Biogas Project) in the generic CPA-DD

- **Paragraph 17**
  The eligibility criteria are verifiable, as evident via usability demonstration to assess the inclusion of the CPA (i.e. CPA 1.1 – Maris – PTPN VII Biogas Project), via review of the corresponding supporting evidences & documentations

- **Paragraph 18**
  The eligibility criteria developed are objective and comprehensive to permit the assessment of the CPA inclusion in the PoA

- **Paragraph 19 & 20**
  The CME has demonstrated competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. The CME has developed and implemented a management system for CPA inclusion. The summary of the fulfilment of the management system criteria are explained as follows:

Paragraph 19	Validation Opinion
(a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;	The CME has defined clearly the Organizational structure within BWC (as the CME) for the inclusion of CPAs in the PoA-DD. This is also documented in the “Roles and responsibilities & review of competences of personnel” procedure, QOP 04, Rev A, March 30, 2012 /P14/ The validation team considered this to be clearly developed & transparent
(b) Records of arrangements for training	Staff training arrangement / planning, including Staff

and capacity development for personnel;	training arrangement / planning, including staff training records, Rev 01, March 30, 2012 /P18/ has been established by the CME & the validation team considered this to be adequately developed
(c) Procedures for technical review of inclusion of CPAs;	According to PoA-DD, technical review for inclusion of new CPAs will be carried out by Quality Control & Technical Review Department. This is also being documented in the Technical review procedure for CPA DD, Technical review procedure for CPA DD, QOP 01, Rev 02, dated April 23, 2012 /P15/ The validation team considered this to be clearly developed & transparent
(d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);	According to PoA-DD, the CME will seek confirmation of CPA (by means of declaration) and also check any- double counting using public information sources like UNFCCC website data. Documented procedure i.e. Double Counting Avoidance Procedure for CPA DD, QOP 02, Rev 02, April 23, 2012 /P16/ is also established & the validation team considered this to be adequately developed
(e) Records and documentation control process for each CPA under the PoA;	According to PoA-DD, a serial numbering system will be implemented that uniquely identifies each CPA through numbers for the CPA and the CPA implementer. This serial numbering system will be used to record baseline and monitoring data on a continuous basis using a database. Documented procedure i.e. A record keeping system for each CPA under the PoA, A record keeping system for each CPA under the PoA, QOP 03, Rev 02, March 30, 2012 /P17/ is also established & the validation team considered this to be adequately developed
(f) Measures for continuous improvements of the PoA management system;	The measures for continuous improvements defined in the Programme of Activities Management System Manual For Blue World Indonesia Version 03, dated 30-3-2012 /P19/ are acceptable by the validation team as this is also in line with the PDCA cycle concept (Plan-Do-Check-Act concept, defined in ISO 9001 Quality Management System)
(g) Any other relevant elements.	The remaining elements defined in the PoA-DD are additional to the descriptions provided for each of the management system criteria defined above & are found to be deemed appropriate & relevant. This is accepted by the validation team

- **Paragraph 21**
  The CPA 1.1 – Maris – PTPN VII Biogas Project included in the PoA has been positively assessed & confirmed that the eligibility criteria has been fulfilled

- **Paragraph 22**
  Since this PoA developed involved 2 methodologies i.e. AMS-III.H & AMS-I.D, hence this paragraph is applicable for further assessment
  According to General Guidelines to SSC CDM methodologies, Version 19.0, EB 69, Annex 27 /B12/, paragraph 16
  "The following combinations of approved methodologies may be applied ***without further assessment of cross effects:***

(b) Combination of any one of the Type III methodologies where activities lead to generation of methane, (i.e. ***AMS-III.H,*** *AMS-III.D, AMS-III.F and AMS-III.G),* ***with any one of the Type I methodologies for utilising the methane generated for generation of renewable energy****, (i.e. AMS-I.A, AMS-I.C,* ***AMS-I.D*** *and AMS-I.F).(approved at EB56);*

Since the PoA-DD involved only AMS-III.H (Type III) & AMS-I.D (Type I), this complies with the requirements of paragraph 16 above & hence, no cross effect assessments are conducted

3.5 Operational and Management Plan

Validation Opinion:

VVS paragraph 154 to 157, 186, 203

Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project

Requirements	Validation Opinion
Description of the operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA, including:	As defined in the PoA-DD Section C, the operation & management of the PoA will be led by the PT Blue World Indonesia. Detailed CME roles & responsibilities are defined & documented in the PoA-DD & also in "Roles and responsibilities & review of competences of personnel" procedure, QOP 04, Rev A, March 30, 2012 /P14/
(i) A record keeping system for each CPA under the PoA	Record keeping system for each CPA under the PoA has been well defined clearly in the PoA-DD Section C & the validation team considered it to be practical **Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project** For this specific CPA case, the records maintained will be listed in A record keeping system for each CPA under the PoA, QOP 03, Rev 02, March 30, 2012 template /P17/ The remaining records would be made available & continually will be updated by the CME during the crediting period of the PoA & the CPAs. This is accepted by the validation team
(ii) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA,	As explained in Section 3.4 report above, the CME will seek a) Declaration from the CPA Implementer confirming that the project is not registered or in the process of being registered as a stand-alone CDM project, outside of the PoA, a bundled CDM Project Activity or another registered PoA. b) Confirmation described in the CPA-DD that states that the project is not registered or in the process of being registered as a stand-alone CDM project, outside of the PoA. c) Confirmation check by reviewing the website of the UNFCCC. & hence the validation team concluded that the system established to avoid double accounting to be deemed appropriate **Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project** The validation team also reviewed Declaration letter by CPA

	Implementer, PT Maris Sustainable Indonesia dated 25 May 2012 /P09/ which declared that the project is not registered or in the process of being registered as a stand-alone CDM project, outside of the PoA, a bundled CDM Project Activity or another registered PoA. This specific case CPA has been given unique identification number i.e. CPA 1.1. The validation team has cross checked the GPS coordinates in the FSR /P08/ versus CDM pipeline in UNFCCC (registered project / under validation or CPA for another PoA) It is confirmed that CPA 1.1 is neither registered / to register as a single CDM project, not a CPA of another PoA
(iii) The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity.	The descriptions & evaluation mechanism for SSC-CPA included in the PoA Section C is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity, has been defined clearly in the PoA-DD (according to paragraph 8, 9 & 10 of Guidelines On Assessment Of Debundling For SSC Project Activities, Version 03, EB 54, Annex 13 /B13/) Hence, the validation team considered the process of checking the de-bundling component of another CDM programme activity to be deemed appropriate **Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project** Declaration letter by CPA Implementer, PT Maris Sustainable Indonesia dated 25 May 2012 /P09/ has been provided by the CPA implementer, PT Maris Sustainable Indonesia to the CME & confirmed that **CPA 1.1 – Maris – PTPN VII Biogas Project** is not a de-bundled component of another CDM programme activity or any large scale activity The validation team also assessed the compliance of paragraphs 8, 9 & 10 of the Guidelines On Assessment Of Debundling For SSC Project Activities, Version 03, EB 54, Annex 13 /B13/ & the following are the validation opinion: **Paragraph 8:** The validation team checked the CDM Pipeline list in http://cd4cdm.org/ website as 31 October 2012 /B03/ for both PoA & CDM project activity pipeline & found neither the CPA Implementer (PT Maris Sustainable Indonesia) nor the CME (BWC) have implemented a large scale PoA/CDM Project activity of the same technology/measure. Hence, the validation team concluded that the requirement stipulated in the Guidelines On Assessment Of Debundling For SSC Project Activities, Version 03, EB 54, Annex 13 /B13/ are fulfilled **Paragraph 9:** The validation team confirmed since the CPA implementer and the CME have not implemented a large scale PoA/CDM Project activity of the same technology/measure hence this paragraph is not applicable **Paragraph 10:** This paragraph is not applicable since the measure is larger than 1% of the small scale thresholds defined by the

	methodology applied & hence the debundling assessment is conducted
(iv) The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA;	As described in Section C of the PoA-DD, the CPA implementer will provide the mandate to CME stating that, they are aware and have agreed that their activity is subscribed to the PoA. The CPA implementer has to give a declaration to CME that the CPA is not a de-bundled component of large scale Project. The CME will confirm that the Project activity is as per EB 54 Annex 13 guideline of debundling and the CPA not a de-bundled component of large scale Project. The validation team condieres this is to be correct & appropriate **Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project** Declaration letter by CPA Implementer, PT Maris Sustainable Indonesia dated 25 May 2012 /P09/ has been provided by the CPA implementer, PT Maris Sustainable Indonesia to the CME & confirmed that the provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA are fulfilled. This has been reviewed by the validation team & accepted

Conclusion:
The validation team concluded that the CME had clearly demonstrated the operational and management arrangements for the PoA in the PoA-DD and this complied with the VVS requirement paragraph 186

3.6 Monitoring Plan

Validation Opinion:

VVS paragraph 131 to 133, 198

The validation team was able to assess the monitoring plan defined in the PoA-DD. Conclusion of the assessments is summarised as follows:

1) Recording requirements has been defined & confirmed the records will be kept for at least 2 years
2) Monitoring & measurements requirements have been defined in the respective procedures such as monitoring procedures, calibration procedure & quality assurance & quality check procedure
3) Reporting & verification requirements have been defined
4) Responsibility for record maintenance at CPA level has been defined
5) Role & responsibility by CME to manage data aggregation, field visits, emission reduction calculation, cross checking CPAs to prevent double counting have been defined in the PoA-DD.
6) Monitoring requirements has been identified in accordance with the methodology /B04/ & the corresponding tools

According to the document review in PoA-DD, detailed monitoring procedures, monitoring structure, monitoring items & functions are clearly demonstrated in the PoA-PDD which enable the monitoring plan to implemented feasibly

Interview & on site assessment through physical inspection with the project participant & consultant has allowed the validation team to confirm that the monitoring plan defined in the PoA-DD is feasible to be implemented

The description provided in the PoA-DD /P03/ on the operational and management arrangements was confirmed based on document review and through OSV interviews.

3.7 Baseline and Monitoring Methodology

3.7.1 Applicability of the selected methodology

Validation Opinion:
VVS paragraph 70 to 81, 149 to 153, 190

The proposed PoA & the subsequent CPAs applies the approved baseline methodology as follows:

1) AMS-III.H, "Methane recovery in wastewater treatment", Version 16 /B04/
2) AMS-I.D, "Grid connected renewable electricity generation", Version 17 /B04/

this also refers to the following tools

1. Tool to determine project emissions from flaring gases containing methane /B22/
2. Tool to calculate baseline, project and/or leakage emissions from electricity consumption /B17/
3. Tool to calculate the emission factor for an electricity system /B05/
4. Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /B06/

Its applicability has been justified to the validation team in accordance with the requirements of the methodology.

The selected baseline methodology is applicable for the project since the project will generate renewable electricity from hydropower source & displaces the grid electricity. The validation team has performed document review & interview with the project participants.

The validation team concludes that the approved methodology has been applied correctly. The summary of the methodology applicability assessment by the validation team are listed as follows:

AMS-III.H Applicability Assessment & Validation Opinion:

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
1. This methodology comprises measures that recover biogas from biogenic organic matter in wastewater by means of one, or a combination, of the following options: (a) Substitution of aerobic wastewater or sludge treatment systems with anaerobic systems with biogas recovery and combustion; (b) Introduction of anaerobic sludge treatment system with biogas recovery and combustion to a wastewater treatment plant without sludge treatment; (c) Introduction of biogas recovery and combustion to a sludge treatment system; (d) Introduction of biogas recovery and combustion to an anaerobic wastewater treatment system such as anaerobic reactor, lagoon, septic tank or an on-site industrial plant; (e) Introduction of anaerobic wastewater treatment with biogas recovery and	Each proposed CPA under this PoA will be in relation to recovery of methane (i.e. biogas) from anaerobic treatment of industrial wastewater in an anaerobic digester system, which would have otherwise been emitted into the atmosphere. The measure to be introduced in each CPA includes option 1(a), 1(d) or 1(f), as identified in paragraph 1 of AMS-III.H version 16.	☐ Feasibility Study or Technical Proposal of the project	The validation team accepted the justifications since the PoA-DD had defined clearly that only measures from Option 1(a), Option 1(d) or Option 1(f) will be considered for each proposed CPA. The CME had also defined that the means to substantiate this is via Feasibility Study or Technical Proposal of the project This will be cross checked each time for every CPA inclusion stage

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
combustion, with or without anaerobic sludge treatment, to an untreated wastewater stream; (f) Introduction of a sequential stage of wastewater treatment with biogas recovery and combustion, with or without sludge treatment, to an anaerobic wastewater treatment system without biogas recovery (e.g. introduction of treatment in an anaerobic reactor with biogas recovery as a sequential treatment step for the wastewater that is presently being treated in an anaerobic lagoon without methane recovery).			
2. In cases where baseline system is anaerobic lagoon the methodology is applicable if: (a) The lagoons are ponds with a depth greater than two meters, without aeration. The value for depth is obtained from engineering design documents, or through direct measurement, or by dividing the surface area by the total volume. If the lagoon filling level varies seasonally, the average of the highest and lowest levels may be taken; (b) Ambient temperature above 15°C, at least during part of the year, on a monthly average basis; (c) The minimum interval between two consecutive sludge removal events shall be 30 days.	In cases where the baseline system is anaerobic lagoons, the CME will ensure that the lagoons are in compliance with conditions (a) and (c) The CME will obtain the value for depth from engineering design documents, or through direct measurement, or by dividing the surface area by the total volume and sludge removal events from the operations logbook and confirmation from the CPA implementer. The average ambient temperature in Indonesia is 27.7 degrees Celsius, which is higher than 15 degrees as stated in paragraph (b).	To confirm §2(a): ☐ Feasibility Study or Technical Proposal of the project ☐ Engineering design of the open lagoon (if available) ☐ Report on direct measurement of depth of lagoon or by dividing the surface area by the total volume (if engineering design not available). To confirm §2(b) ☐ Document on weather statistics from public source for the last 03 years. To confirm §2(c) ☐ sludge removal events from the operations logbook and confirmation from the CPA implementer.	The validation team accepted the justifications since the PoA-DD had defined clearly the means to substantiate the lagoons depth which is in line with the methodology. As for the ambient temperature, the validation team checked the public website /B03/ & confirmed the average temperature in Indonesia is 27.7 degrees Celsius As for the minimum interval between 2 consecutive sludge removal events, the means to substantiate i.e. operations logbook is accepted, in line with the practice implemented in most oil palm mill (confirmed by the local expert from the validation team). Confirmation from the CPA implementer is considered to be appropriate as well

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
3. The recovered biogas from the above measures may also be utilised for the following applications instead of combustion/flaring: (a) Thermal or mechanical, electrical energy generation directly; (b) Thermal or mechanical, electrical energy generation after bottling of upgraded biogas, in this case additional guidance provided in Annex 1 shall be followed; or (c) Thermal or mechanical, electrical energy generation after upgrading and distribution, in this case additional guidance provided in Annex 1 shall be followed: (i) Upgrading and injection of biogas into a natural gas distribution grid with no significant transmission constraints; (ii) Upgrading and transportation of biogas via a dedicated piped network to a group of end users; or (iii) Upgrading and transportation of biogas (e.g. by trucks) to distribution points for end users. (d) Hydrogen production; (e) Use as fuel in transportation applications after upgrading.	The recovered biogas from the above measures may also be utilised for application (a) of the applications listed in paragraph 3. This will be determined by reviewing the technical design documentation of the project at time of inclusion (as per eligibility criteria of the project). CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for inclusion under this PoA.	☐ Feasibility Study or Technical Proposal of the project	The validation team accepted the justifications since the PoA-DD had defined clearly that only CPAs where biogas is utilized for the application: thermal or mechanical, electrical energy generation directly to be applicable for proposed CPA. The CME had also defined that the means to substantiate this is via Feasibility Study or Technical Proposal of the project This will be cross checked each time for every CPA inclusion stage
4. If the recovered biogas is used for project activities covered under paragraph 3 (a), that component of the project activity can use a corresponding methodology under Type I.	CPA shall only be allowed to claim emission reduction for AMS.III.H only. Emission reductions under other methodology shall not be accounted for.	☐ Emission reduction calculation worksheet prepared for the CPA as per methodology requirements.	The validation team accepted the justifications since the PoA-DD had defined clearly that AMS-I.D methodology will be applicable for future CPAs which involved use of recovered biogas for project activity covered in paragraph 3(a)
5. For project activities covered under paragraph 3 (b), if bottles with upgraded biogas are sold outside the project boundary, the end-use of the biogas shall be ensured via a contract between the bottled biogas vendor and the end-user. No emission	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
reductions may be claimed from the displacement of fuels from the end use of bottled biogas in such situations. If however the end use of the bottled biogas is included in the project boundary and is monitored during the crediting period CO2 emissions avoided by the displacement of fossil fuel can be claimed under the corresponding Type I methodology, e.g. AMS-I.C Thermal energy production with or without electricity.	inclusion under this PoA.		
6. For project activities covered under paragraph 3 (c) (i), emission reductions from the displacement of the use of natural gas are eligible under this methodology, provided the geographical extent of the natural gas distribution grid is within the host country boundaries.	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for inclusion under this PoA.	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable
7. For project activities covered under paragraph 3 (c) (ii), emission reductions for the displacement of the use of fuels can be claimed following the provision in the corresponding Type I methodology, e.g. AMS-I.C.	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for inclusion under this PoA.	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable
8. In particular, for the case of 3 (b) and (c) (iii), the physical leakage during storage and transportation of upgraded biogas, as well as the emissions from fossil fuel consumed by vehicles for transporting biogas shall be considered. Relevant procedures in paragraph 11 of Annex 1 of AMS-III.H .Methane recovery in wastewater treatment. shall be followed in this regard.	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for inclusion under this PoA.	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable
9. For project activities covered under paragraph 3 (b) and (c), this methodology is applicable if the upgraded methane content of the biogas is in accordance with relevant national regulations (where these exist) or, in the	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
absence of national regulations, a minimum of 96% (by volume).	inclusion under this PoA.		
10. If the recovered biogas is utilized for the production of hydrogen (project activities covered under paragraph 3 (d)), that component of the project activity shall use the corresponding methodology AMS-III.O .Hydrogen production using methane extracted from biogas.	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for inclusion under this PoA.	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable
11. If the recovered biogas is used for project activities covered under paragraph 3 (e), that component of the project activity shall use corresponding methodology AMS-III.AQ .Introduction of Bio-CNG in road transportation.	Not applicable. CPA where biogas is utilized for applications as listed in paragraph 3 (b) to (e) are not eligible for inclusion under this PoA.	-	The validation team accepted the justifications since only CPAs implemented according to option paragraph 3a is applicable
12. New facilities (Greenfield projects) and project activities involving a change of equipment resulting in a capacity addition of the wastewater or sludge treatment system compared to the designed capacity of the baseline treatment system are only eligible to apply this methodology if they comply with the relevant requirements in the General guidelines to SSC CDM methodologies. In addition the requirements for demonstrating the remaining lifetime of the equipment replaced, as described in the general guidelines shall be followed.	In case of CPA that are Greenfield projects, the baseline scenario shall be determined in accordance with latest version of the General Guidance on General Guidelines to SSC CDM methodologies.	☐ Description in the specific CPA-DD on the consideration of requirements of the General Guidance on General Guidelines to SSC CDM methodologies.	The validation team accepted the justifications since the future CPAs to be included would also include both existing & new facilities & hence, compliance assessment with the General Guidance on General Guidelines to SSC CDM methodologies would need to be conducted
13. The location of the wastewater treatment plant as well as the source generating the wastewater shall be uniquely defined and described in the PDD.	The location of the wastewater treatment plant as well as the source generating the wastewater will be uniquely defined and described in the specific CPA-DD.	☐ Description in the specific CPA-DD of the location of the wastewater treatment plant as well as the source generating the wastewater in section A.5 and location in section A.7 of the CPA-DD.	The validation team accepted the justifications since this is specific for each CPA. Means to substantiate is also accepted since the location of the wastewater will be specified clearly in CPA-DD Section A.5 (layout diagram) & A.7 (where the specific project activity coordinates are stated)
14. Measures are limited to	CPAs to be	☐ Emission	The validation team

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
those that result in aggregate emissions reductions of less than or equal to 60 kt CO2 equivalent annually from all Type III components of the project activity.	included in the PoA shall be limited to those that result in emission reductions of less than or equal to 60 kt CO2 equivalent annually.	reduction calculation worksheet prepared for the CPA as per methodology requirements. ☐ Description in the specific CPA-DD that the CPA result in aggregate emissions reductions of less than or equal to 60 kt CO2 equivalent annually	accepted the justifications since this will checked for each CPA to be included in relation with the mill capacity versus measure implemented i.e. methane recovery
38. The following conditions apply for use of this methodology in a project activity under a programme of activities: In case the project activity involves the replacement of equipment, and the leakage effect of the use of the replaced equipment in another activity is neglected, because the replaced equipment is scrapped, an independent monitoring of scrapping of replaced equipment needs to be implemented. The monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other. For this purpose scrapped equipment should be stored until such correspondence has been checked. The scrapping of replaced equipment should be documented and independently verified.	In case the project activity involves the replacement of equipment this paragraph will be taken into consideration.	☐ Scrapping documentation (in case equipment was replaced).	The validation team accepted the justifications since this depends on each specific CPA & means to substantiate i.e. scrapping documentation for replaced equipment has been defined

AMS-I.D Applicability Assessment & Validation Opinion:

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
Ref: AMS.I.D Version 17, §1: This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	A CPA will consist of a renewable energy generation unit that: a) supplies electricity to a national or regional Indonesian grid; or b) supplies electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	Any of the following documents: ☐ (Pre) Power Purchase Agreement, ☐ Letter from grid operator on acceptance of purchase of electricity from CPA. ☐ Feasibility Study / ☐ Technical Proposal of the project	The validation team accepted the justifications since the PoA-DD had defined clearly that for every CPA, it will consist only renewable energy generation units i.e. hydro which supplies electricity to the national or regional grid of Indonesian grid & to identified consumer facility via national / regional grid through a contractual arrangement such as wheeling This will be cross checked each time for every CPA inclusion stage
Ref: AMS.I.D Version 17, §2: Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2.	All CPA will conform to AMS.I.D: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	Any of the following documents: ☐ (Pre) Power Purchase Agreement, ☐ Letter from grid operator on acceptance of purchase of electricity from CPA. ☐ Feasibility Study / ☐ Technical Proposal of the project	The PoA-DD had specified clearly that every CPA will supply electricity to a national or a regional grid; or supply electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling. This will be cross checked each time for every CPA inclusion stage
Ref: AMS.I.D Version 17, §3: This methodology is applicable to project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition; (c) Involve a retrofit of (an) existing plant(s); or (d) Involve a replacement of (an) existing plant(s).	CPA under this PoA may involve: (a) Installation of a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition	Any of the following documents: ☐ Feasibility Study or technical Proposal of the project	The PoA-DD had specified clearly that only (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant) (b) capacity addition will applicable for all CPAs
Ref: AMS.I.D Version 17, §4:	This is not	-	The validation team

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: A. The project activity is implemented in an existing reservoir with no change in the volume of reservoir; B. The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m2; C. The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m2.	applicable since the CPA do not involve establishment of hydropower plants.		accepted the justifications since the PoA-DD Section A.2 had clearly described that each CPA under the PoA will comprised of methane recovery system from waste water treatment facilities
Ref: AMS.I.D Version 17, §5: If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	CPAs will consider this condition and the installed capacity of the renewable component shall not exceed 15 MW as per eligibility criteria.	Any of the following documents: ☐ Feasibility Study or technical Proposal of the project	The validation team accepted the justifications since this can be substantiated via availability of the Feasibility Study or technical Proposal of the project. This will be cross checked each time for every CPA inclusion stage

<table>
<tr><th colspan="3">Extracted from PoA-DD Section B.2</th><th rowspan="2">Means of Validation</th></tr>
<tr><th>Applicability Criteria</th><th>Explanation in PoA-DD</th><th>Documentation required</th></tr>
<tr><td>Ref: AMS.I.D Version 17, §6: Combined heat and power (co-generation) systems are not eligible under this category.</td><td>CPAs that apply technology scenario E will consider this condition and thus not include combined heat and power systems.</td><td>-</td><td>The validation team accepted the justifications since the PoA-DD Section A.6 clearly stated the type of scenarios for inclusion of CPA i.e.
<table>
<tr><th>Project Scenario</th><th>Description of scenario</th></tr>
<tr><td>1</td><td>Biogas plants installed at new (Greenfield) facilities</td></tr>
<tr><td>2</td><td>Biogas plants installed at existing facilities</td></tr>
<tr><td>E</td><td>Utilization of biogas for power generation (in combination with scenario 1 or 2)</td></tr>
</table>
For scenario E, it is clear no co-generation system is applicable</td></tr>
<tr><td>Ref: AMS.I.D Version 17, §7: In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.</td><td>CPAs will consider this condition and the installed capacity of the renewable component shall not exceed 15 MW as per eligibility criteria.</td><td>Any of the following documents:
☐ Feasibility Study or technical Proposal of the project</td><td>The validation team accepted the justifications since this will be substantiated via Feasibility Study or technical Proposal of the project
This will be cross checked each time for every CPA inclusion stage</td></tr>
<tr><td>Ref: AMS.I.D Version 17, §8: In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.</td><td>CPAs will consider this condition and the installed capacity of the renewable component shall not exceed 15 MW as per eligibility criteria.</td><td>Any of the following documents:
☐ Feasibility Study or technical Proposal of the project</td><td>The validation team accepted the justifications since this will be substantiated via Feasibility Study or technical Proposal of the project
This will be cross checked each time for every CPA inclusion stage</td></tr>
</table>

Extracted from PoA-DD Section B.2			Means of Validation
Applicability Criteria	**Explanation in PoA-DD**	**Documentation required**	
Ref: AMS.I.D Version 17, §25: In the specific case of biomass project activities the applicability of the methodology is limited to either project activities that use biomass residues only or biomass from dedicated plantations complying with the applicability conditions of AM0042.	Not applicable, as the CPA are not biomass project activities.	-	The validation team accepted the justifications since this will be substantiated via Feasibility Study or technical Proposal of the project This will be cross checked each time for every CPA inclusion stage
Ref: AMS.I.D Version 17, §26: In the specific case of biomass project activities the determination of leakage shall be done following the general guidance for leakage in small-scale biomass project activities (attachment C of Appendix B of simplified modalities and procedures for small-scale clean development mechanism project activities; decision 4/CMP.1) or following the procedures included in the leakage section of AM0042.	Not applicable, as the CPA are not biomass project activities.	-	The validation team accepted the justifications since the PoA-DD Section A.2 had clearly described that each CPA under the PoA will comprised of methane recovery system from waste water treatment facilities. No biomass activity is involved
Ref: AMS.I.D Version 17, §27: In case the project activity involves the replacement of equipment, and the leakage from the use of the replaced equipment in another activity is neglected because the replaced equipment is scrapped, an independent monitoring of scrapping of replaced equipment needs to be implemented. The monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other. For this purpose scrapped equipment should be stored until such correspondence has been checked. The scrapping of replaced equipment should be documented and independently verified.	CPAs will consider this condition as per eligibility criteria.	☐ Scrapping documentation (in case equipment was replaced).	The validation team accepted the justifications since this depends on each specific CPA & means to substantiate i.e. scrapping documentation for replaced equipment has been defined

Justification that CPA qualifies as Type I, II, and/or III

Applicability Conditions	CPA Status – Explanation in PoA-DD	Validation Opinion
The CPA qualifies as Type I, II, and/or III during every year of the creating period in accordance with applicable provisions for project activity eligibility in the project standard.	As per Clean development mechanism project standard (version 02.1), renewable energy project activities with a maximum output capacity of 15 MW (or an appropriate equivalent) qualifies as Type I. For CPA under this PoA the renewable energy output capacity will be determined based the guidance in the latest version if the General Guidelines to SSC CDM methodologies at time of inclusion. Project activities which result in GHG emission reductions not exceeding 60 ktCO2e per year in any year of the crediting period can qualify as Type III. Prior to inclusion of the CPA, CME will prepare a emission reduction spread sheet calculated in line with the methodology requirements and taking into consideration future developments of the CPA implementer (capacity increase, etc). The CPA implementer and CME will confirm in the CPA-DD that the CPA will result in emission reduction of less than or equal to 60 kt CO2 during the whole crediting period.	The validation team accepted the justifications since the PoA implemented will comprise of CPAs that would comply with Type III or Type III + Type I depending on combination of scenarios described in PoA-DD Table A.6.1

Remarks: The applicability conditions fulfillment for the Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project is demonstrated as part of the eligibility criteria – see the separate validation report prepared for Specific CPA case: CPA 1.1 – Maris – PTPN VII Biogas Project, Section 3.4

The project eligibility to a small-scale project was determined by the validation team through assessment of the eligibility criteria – See Section 3.4 above for further details

All GHG emissions occurring within the CDM project activity boundary as a result of the implementation of the proposed CDM project activity are indicated as the project emissions according to the approved methodology. There will be no other expected GHG emissions which can contribute more than 1 % of the overall expected average annual emissions other that those stated in the approved methodology.

3.7.2 Project Boundary

Validation Opinion:

VVS paragraph 82 to 87, 191, 192

The project boundary was assessed in the context of physical site inspection, interviews & based on supporting evidences & documents submitted for the project design.

As indicated in the PoA-DD Section A.5, the physical / geographical boundary of the PoA is in Indonesia

The sources and sinks of greenhouse gas identified in the PoA-DD & specific case CPA-DD are deemed appropriate. The project boundary has been clearly determined in accordance with the methodology (see below table). The validation team assessed the appropriateness of the justifications provided for inclusion / exclusion of the source of gas based on the review of feasibility study report, focusing on the project technical descriptions & equipment's proposed for the project /P08/ & also based on the validation team experience

All assumptions, reference documents and relevant local policies and regulations are correctly quoted and referenced in the PoA-PDD & specific case CPA-DD. A comprehensive overview about all emissions included in the project boundary is provided in the PoA-PDD Part II, Section B.3 & specific case CPA-DD Section D.3 for project activity emissions and baseline emissions.

	GHGs involved	Description
Baseline emissions AMS-III.H	CO_2	Included: Emissions on account of electricity or fossil fuel used – if the baseline involves the use of electricity or fossil fuels.
	CH_4	Included: a) Decay emissions from the baseline wastewater treatment system - Major emission source in case of wastewater treatment plants b) Emissions from the discharge of the effluent into river/lake/sea - Major emission source in case of wastewater being discharged to sea/river/lake.
	N_2O	Excluded
Baseline emissions AMS-I.D	CO_2	Included: CO2 emission from electricity generation in fossil fuel fired power plants that are displaced due to the project activity - Main emission source
	CH_4	Excluded
	N_2O	Excluded
Project emissions AMS-III.H	CO_2	Included: Emissions from electricity or fuel consumption in the project activity
	CH_4	Included: a) Emissions from wastewater treatment - Important emission source in case of wastewater treatment plants. b) Emissions from the discharge of the effluent into river/lake/sea - Important emission source in case of wastewater discharge to sea/river/lake. c) Emissions from biogas release in capture system - Inefficiency in methane capture in the anaerobic digesters may contribute to methane emissions from biogas systems. d) Emissions due to incomplete flaring of biogas - May be an important source of emission. Incomplete combustion of biogas due to efficiency of flaring system leads to fugitive emission of methane.
	N_2O	Nil

Project emissions AMS-I.D	CO_2	Included: Electricity consumption / generation - May be an important emission source. If electricity from grid and/or electricity from captive diesel power plant are consumed to run the project activity, emissions from these sources shall be included.
	CH_4	Included
	N_2O	Excluded
Leakage AMS-I.D & AMS-III.H	No leakage	This is consistent with AMS-I.D version 17 where the project participant does not need to consider leakage as the energy generating equipment is not transferred from another activity. It is also consistent with AMS-III.H version 16 where the project participant does not need to consider leakage as the technology is not using equipment transferred from another activity

In addition to the above, the CME has defined in the PoA-DD that all CPAs which will be included in the PoA are all located only in the Indonesia. Based on the validation team local knowledge & regulation

experiences, the validation team could confirm that there are no mandatory regulations on the development of such projects in Indonesia. The implementation of the PoA remains as a voluntary action

3.7.3 Baseline Identification

Validation Opinion:

VVS paragraph 88 to 95

For AMS-III.H:

The validation team concluded that the baseline has been identified in line with the methodology, where in case of existing industrial wastewater treatment facilities; the baseline will be the continuation of the existing system for wastewater treatment.
The PoA-DD has included provisions for demonstration of the baseline where paragraph 26 & 27 of AMS-III.H will be considered for existing industrial wastewater treatment facilities

As for Greenfield industrial wastewater treatment facilities and activities involving change of equipment resulting in capacity addition of the wastewater and/or sludge treatment system compared to the design capacity of the baseline system, the validation team found that the PoA-DD had specified that the CPA is only eligible to use the baseline and monitoring methodology if they are able to demonstrate using the latest version of the "General Guidelines to SSC CDM Methodologies" at time of inclusion
According to the PoA-DD, the baseline determined using the "General Guidelines to SSC CDM Methodologies" will be one of the following:

- Aerobic wastewater treatment system without biogas recovery
- Anaerobic wastewater treatment system (such as lagoon, septic tank or an on-site industrial plant) without biogas recovery

This is accepted by the validation team & the assessment corresponding to the "General Guidelines to SSC CDM Methodologies" will be documented in the Annex 3 of CPA-DD

For AMS-I.D:

For CPA that also apply technology scenario E, the baseline defined in the PoA-DD is in line with AMS-I.D paragraph 10 & accepted by the validation team

The baseline determination is considered as transparent and reasonable.

The approved baseline methodology applicable to the project - explicit criteria - implicit criteria (e.g. available scenarios, applicability of formulas for BE/PE/LE calculations)	☒ Yes ☐ No	See details above
PDD includes all assumptions and data used by project participants	☒ Yes ☐ No	All assumptions and date defined in the PoA-DD are justifiable and reasonable
All the references and documents used are relevant for establishing the baseline scenario	☒ Yes ☐ No	All references and documents are relevant to determine the baseline scenario.
All the references and documents used are correctly quoted and conservatively interpreted in the PDD	☒ Yes ☐ No	All references and documents are conservative and reasonable to determine the baseline scenario.
All relevant policies / regulations considered are listed in the PDD	☒ Yes ☐ No	All relevant regulations of the Host country have been considered by the project proponent.
Identified potential baseline scenarios reasonably represent what would/could occur in the absence of the proposed project activity	☒ Yes ☐ No	In absence of the project activity, there will be continual of greenhouse gases emission from fossil fuel fired power plant.

The baseline scenario selection is appropriate and determined according to the methodology	☒ Yes ☐ No	As per AMS-III.H version 16 & AMS-I.D version 17
The approved methodology used is applicable to the identified baseline scenario	☒ Yes ☐ No	As per AMS-III.H version 16 & AMS-I.D version 17

3.8 Additionality

3.8.1 CDM consideration of the PoA

Validation Opinion:

VVS paragraph 105 to 112, 194

According to Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3 /B01/ paragraph 194

The DOE shall assess prior consideration of the CDM for the PoA applying the provisions of paragraph 107 above mutatis mutandis.

According to paragraph 107

For a project activity with a start date on or after 2 August 2008, for which a PDD has not been published for global stakeholder consultation or a new methodology has not been proposed to the Board before the project activity start date, the DOE shall confirm by referring to the list of prior consideration notifications from the UNFCCC website and communication between the project proponent, the secretariat and the host Party DNA regarding the commencement of a new project activity.If such notification has not been provided by the project participants within 180 days of the project activity start date, the DOE shall determine that the CDM was not seriously considered in the decision to implement the project activity.

Hence, this is applicable & valid for the PoA. Since the CPA 1.1 – Maris – PTPN VII Biogas Project has the expected starting date (31-12-2012 - the date the equipment purchase contract is expected to be signed. At the time of validation finalization, no construction or equipment contract has been signed) which is not prior to the PoA webhosting date (i.e. 25 May 2012 - 23 June 2012), hence this CPA and all other subsequent CPAs being included to the PoA will have valid starting date which is automatically have met the requirements of CDM prior consideration

3.8.2 Additionality of the PoA

Validation Opinion:

VVS paragraph 101 to 104, 158 to 161, 195

According to VVS paragraph 195, the DOE shall assess the additionality of a PoA in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" /B14/.
The validation opinion regarding the additionality compliance according to the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/ - see below:

Paragraph 7. Additionality shall be demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur.

Paragraph 8. PoAs that consist of one or more microscale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the Guidelines for demonstrating additionality of microscale project activities.

Paragraph 9. PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the "Guidelines for demonstrating additionality of small-scale project activities".

Paragraph 11. Large-scale CPAs (i.e. CPAs that apply one or more large scale and small scale CDM methodologies), small-scale CPAs (i.e. CPA exclusively applying small scale CDM methodologies) and microscale CPAs (i.e. CPAs exclusively comprised of units that comply with microscale thresholds) may be included in the same PoA. The "Guidelines for demonstrating additionality of microscale project activities" may be applied to a large scale or small-scale CPA if all of the units in the CPA are below the thresholds that define microscale project activities. The "Guidelines on the demonstration of additionality of small-scale project activities" may be used for small-scale CPAs only.

Paragraph 13. The CME shall demonstrate that compliance with the additionality-related eligibility criteria set in the PoA design document will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.

Validation opinion:

According to PoA-DD Part II, Section B.5, the additionality will be demonstrated on CPA-level according to at least one of the following barriers

1) Approach A: For micro-scale projects
   In the cases where the emission reductions resulting from the methane recovery activity (i.e. Type III component) is at a scale of no more than 20 ktCO_2e per year and (in case the project is generating electricity with the biogas that was recovered) the installed capacity of the power generation is no more than 5 MW installed electricity generation capacity
   It is noted that the micro scale CPAs will be considered to be additional as long it complies with the requirements stated in Guidelines for demonstrating additionality of microscale project activities Version 04.0, EB 68, Annex 26 /B18/

2) Approach B: For small-scale projects – additionality will be demonstrated via Investment barrier

Conclusion:
The validation team concluded that the CME has demonstrated "(i) the proposed voluntary measure would not be implemented" under absence of CDM support. The demonstration of additionality was in accordance with the "Clean Development Mechanism Project Standard, Version 02.1, EB 70, Annex 2, paragraph 154 /B16/ and "Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 paragraph 7 to 9 and 11 /B14/.

3.8.3 Approach for demonstrating additionality of CPA under the PoA

Validation Opinion:

VVS paragraph 101 to 104, 158 to 161, 195

According to PoA-DD Part II. Section B.5, the additionality will be demonstrated on CPA-level.

The approach for demonstrating the additionality of CPA under the PoA for each type of CPA i.e. micro & small scale projects is validated as follows:

Approach A: For micro-scale projects

Additionality demonstration approach: Guidelines for demonstrating additionality of microscale project activities Version 04.0, EB 68, Annex 26 /B18/

According to the PoA-DD Section B.5, this is demonstrated via compliance & assessment of each criteria defined in Paragraph 2 of the Guidelines for demonstrating additionality of microscale project activities Version 04.0, EB 68, Annex 26 /B18/.

The justifications are to be provided at the CPA level, for each criteria as listed in the Paragraph 2 of the Guidelines for demonstrating additionality of microscale project activities Version 04.0, EB 68, Annex 26 /B18/.

Besides, the validation team also cross checked for demonstrating additionality for CPAs up to 5MW and located in the geographic locations / regions indicated within the special underdeveloped zone of the host country (i.e. Indonesia) identified by the national regulation/ publication "The State Minister of Underdeveloped Zone Development Decree No. 001 issued in 2005 about National Strategy for

Underdeveloped Zone Development, Ref. Number: 001/KEP/M-PDT/I/2005" /P13/. The validation team considers this document to be valid as it lists out the geographic areas defined as the special underdeveloped zones in Indonesia.
Hence Approach 1 additionality approach demonstration is accepted by the validation team

Approach B: For Small scale projects

Additionality demonstration approach: Investment barrier

In summary, the followings key criteria have been considered by the CME for demonstration additionality via investment barrier approach for each CPAs & validation opinion conclusion

No.	Items	Validation opinion
1	Type of investment analysis	According to the PoA-DD Part II, Section B.5, benchmark analysis has been selected The simple cost analysis is not applicable as CPAs generate revenue from the sales of electricity generation other than CDM revenue. The validation team has assessed the baseline scenario which also reveals that the continuation of the current situation - continuation of the current situation - usage of existing open anaerobic lagoons for wastewater treatment & electricity will continue to be imported from the grid, which is outside the direct control of the CPA Implementer. Hence, the choice for the CPA Implementers are restricted to "invest or not to invest". The validation team concludes that the benchmark approach is the most suited as defined in the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ paragraph 16
2	Financial indicator	According to the PoA-DD Part II, Section B.5, the financial indicator selected will be either Option 1: Equity IRR or Option 2: Project IRR See below – Type of benchmark
3	Type of benchmark	According to the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ paragraph 12, *"Local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for equity IRR"*. The type of benchmark selected by the project participant are as follows: **Option 1: ROE (return on equity), appropriate benchmark for Equity IRR** According to the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ paragraph 13, *"In the cases of projects which could be developed by an entity other than the project participant the benchmark should be based on parameters that are standard in the market"*. Therefore the validation team concludes that the benchmark selected is appropriate & conforms to the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ **Option 2.1: Local commercial lending rate,** **Option 2.2: WACC** **Both are appropriate benchmarks for Project IRR** This is already in line with the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ paragraph 12 & the validation team concludes that the benchmark options for Project IRR is correct
4	Investment analysis input parameters	According to the PoA-DD Part II, Section B.5, it is stated that "*The investment analysis will be based on the project details considered by the board when approving the investment in the project. Therefore, the inputs to the investment analysis will be considered relevant to the timing of the investment decision"*

		” This is in line with the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ paragraph 6 “*Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant”* and accepted by the validation team .
5	Sensitivity analysis	According to the PoA-DD Part II, Section B.5, it will be demonstrated & assessed based on reasonable varations on the crotocal assumptions. The validation team considered this in line with the Guidelines On The Assessment Of Investment Analysis, Version 05 /B08/ paragraph 20 which states that, *“Only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation….”;* and article 21 states that, *“As a general point of departure variations in the sensitivity analysis should at least cover a range of +10% and 10%,…….”* The specific critical assumptions will be identified at CPA level. This is accepted by the validation team

During on-site validation, the validation team assessed the approach used to demonstrate the additionality of the specific CPA case i.e. CPA 1.1 – Maris – PTPN VII Biogas Project under BWC Sustainable Biogas Recovery Programme of Activities in Indonesia. **See the detailed assessment results in the separate report for CPA 1.1 – Maris – PTPN VII Biogas Project**

3.9 GHG Emission Reductions from a typical CPA

Validation Opinion:

VVS paragraph 96 to 100

The GHG emission reduction calculations are based on the formulae outlined in the following methodologies:

1) AMS-III.H Version 16 /B04/
2) AMS-I.D Version 17 /B04/

The validation team has confirmed the calculations are transparently documented & appropriate assumptions regarding the expected amount of electricity generated have been used to determine the emission reductions.

A. Baseline Emissions

The baseline emissions comprise of methane emissions from the existing open anaerobic lagoons and carbon dioxide emissions from the fossil fuels based power plants connected through the Indonesia national grid.

AMS-III.H

1.1) Methane (CH_4) emissions from the existing wastewater treatment in the absence of the project activity

According to the methodology, the baseline emissions may consist of:

$BE_{methane,\ y} = BE_{power} + BE_{ww,treatment,y} + BE_{s,treatment,y} + BE_{ww,discharge,y} + BE_{s,final,y}$

Where,

$BE_{methane,\ y}$ = Baseline emissions in year y (tCO_2e)

$BE_{power,y}$ = Baseline emissions from electricity or fossil fuel consumption in year y (tCO_2e)

$BE_{ww,treatment,y}$ = Baseline emissions of wastewater treatment system affected by the project activity (tCO_2e)

$BE_{s,treatment,y}$ = Baseline emissions of the sludge treatment system affected by the project

activity in year y (tCO_2e)

$BE_{ww,discharge,y}$ = Baseline methane emissions from degradable organic carbon in treated wastewater discharged in to sea/river/lake in year y (tCO_2e)

$BE_{s,final,y}$ = Baseline methane emissions from anaerobic decay of the final sludge produced in year y (tCO_2e)

The following baseline emissions as specified in AMS-III.H version 16 /B04/ paragraph 29, that have been included and excluded from the baseline emissions estimation including the validation team's conclusion:

Included baseline emission sources	**Validation team's conclusion**	
CO_2 emissions on account of electricity or fossil fuel used ($BE_{power,y}$)	Emissions on account of electricity or fossil fuel used – if the baseline involves the use of electricity or fossil fuels, depending on the CPA (whether it would apply both combination scenario 1 / 2 + scenario E) This is considered to be correct by the validation team	
	The emission on the account of electricity ($BE_{power,y}$ = $BE_{EC,y}$) consumption will be calculated in accordance with the Tool to calculate baseline, project and/or leakage emissions from electricity consumption, Version 01, EB 39, Annex 7 /B17/ The following equations have been defined in the PoA-DD in order to determine the project emisisons from electricity & fuel used $BE_{EC,y} = \sum_j EC_{BE,k,y} \times EF_{EL,k,y} \times (1 + TDL_{k,y})$ Where:	
	$BE_{EC,y}$	Project emissions from electricity consumption in year y (tCO2e/yr)
	$EC_{BE,k,y}$	Quantity of electricity consumed by the project electricity consumption source k in year y (MWh/yr)
	$EF_{EL,k,y}$	Emission factor for electricity generation for source k in year y (tCO_2/MWh)
	$TDL_{k,y}$	Average technical transmission and distribution losses for providing electricity to source k in year y
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions from the baseline wastewater treatment systems ($BE_{ww,treatment,y}$)	Decay emissions from the baseline wastewater treatment system - Major emission source in case of wastewater treatment plants This is correct & applicable for each CPA by the validation team The following equation will be applied to determine $BE_{ww,treatment,y}$, in the PoA-DD $BE_{ww,treatment,y} = \sum_i (Q_{ww,i,y} * COD_{inf\ low,i,y} * \eta_{COD,BL,i} * MCF_{ww,treatment,BL,i}) * B_{o,ww} * UF_{BL} * GWP_{CH4}$	
	$Q_{ww,i,y}$	Volume of wastewater treated in baseline wastewater treatment system *i* in year *y* (m^3). For *ex ante* estimation, forecasted wastewater generation volume or the designed capacity of the wastewater treatment facility can be used. However, the *ex post* emissions reduction calculation shall be based on the actual monitored volume of treated wastewater

	$COD_{\inf low,i,y}$	Chemical oxygen demand of the wastewater inflow to the baseline treatment system *i* in year *y* (t/m^3). Average value may be used through sampling with the confidence/precision level 90/10
	$\eta_{COD,BL,i}$	COD removal efficiency of the baseline treatment system *i*, determined as per the paragraphs 26, 27 or 28 of AMS-III.H
	$MCF_{ww,treatment,BL,i}$	Methane correction factor for baseline wastewater treatment systems *i* (*MCF* values as per Table III.H.1)
	i	Index for baseline wastewater treatment system
	$B_{o,ww}$	Methane producing capacity of the wastewater (IPCC value of 0.25 kg CH_4/kg COD)
	UF_{BL}	Model correction factor to account for model uncertainties (0.89)
	GWP_{CH4}	Global Warming Potential for methane (value of 21)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions on account of inefficiencies in the baseline wastewater treatment systems and presence of degradable organic carbon in the treated wastewater discharged into river/lake/sea ($BE_{ww,discharge,y}$)	Emissions from the discharge of the effluent into river/lake/sea - Major emission source in case of wastewater being discharged to sea/river/lake. This is correct & applicable for each CPA by the validation team, unless the treated wastewater / untreated wastewater are being land applied which is a common practice in Indonesia, confirmed by the validation team's experience in auditing Roundtable on Sustainable Palm Oil standard & by the local expert The following equation will be applied to determine $BE_{ww,discharge,y}$, in the PoA-DD $BE_{ww,discharge,y} = Q_{ww,y} * GWP_{CH4} * B_{o,ww} * UF_{BL} * COD_{ww,discharge,BL,y} * MCF_{ww,BL,discharge}$ Where	
	$Q_{ww,y}$	Volume of treated wastewater discharged in year *y* (m^3)
	UF_{BL}	Model correction factor to account for model uncertainties (0.89)
	$COD_{ww,discharge,BL,y}$	Chemical oxygen demand of the treated wastewater discharged into sea, river or lake in the baseline situation in the year *y* (t/m^3). If the baseline scenario is the discharge of untreated wastewater, the COD of untreated wastewater shall be used
	$MCF_{ww,BL,discharge}$	Methane correction factor based on discharge pathway in the baseline situation (e.g. into sea, river or lake) of the wastewater (fraction) (*MCF* values as per Table III.H.1)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	

Excluded baseline emission sources	**Validation team's conclusion**
CH_4 emissions from the baseline sludge	The sludge extraction and disposal method in the baseline scenario is the same as in the project scenario. The exclusion is conservative and appropriate.

treatment systems ($BE_{s,treatment,y}$)	The following equation will be applied to determine $BE_{s,treatment,y}$, in the PoA-DD in case applicable $BE_{treatment,s,y} = \sum_j S_{j,BL,y} * MCF_{s,treatment,BL,j} * DOC_s * UF_{BL} * DOC_F * F * 16/12 * GWP_{CH4}$ Where	
	$S_{j,BL,y}$	Amount of dry matter in the sludge that would have been treated by the sludge treatment system *j* in the baseline scenario (t). For *ex ante* estimation, forecasted sludge generation volume or the designed capacity of the sludge treatment facility can be used. However, the *ex post* emissions reduction calculation shall be based on the actual monitored volume of treated sludge
	j	Index for baseline sludge treatment system
	DOC_s	Degradable organic content of the untreated sludge generated in the year *y* (fraction, dry basis). Default values of 0.5 for domestic sludge and 0.257 for industrial sludge shall be used
	$MCF_{s,treatment,BL,j}$	Methane correction factor for the baseline sludge treatment system *j* (*MCF* values as per Table III.H.1)
	UF_{BL}	Model correction factor to account for model uncertainties (0.89)
	DOC_F	Fraction of DOC dissimilated to biogas (IPCC default value of 0.5)
	F	Fraction of CH_4 in biogas (IPCC default of 0.5)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions from the decay of the final sludge generated by the baseline treatment systems ($BE_{s,final,y}$)	The sludge extraction and disposal method in the baseline scenario is the same as in the project scenario. The exclusion is conservative and appropriate. The following equation will be applied to determine $BE_{s,final,y}$, in the PoA-DD in case applicable $BE_{s,final,y} = S_{final,BL,y} * DOC_s * UF_{BL} * MCF_{s,BL,final} * DOC_F * F * 16/12 * GWP_{CH4}$ Where	
	$S_{final,BL,y}$	Amount of dry matter in the final sludge generated by the baseline wastewater treatment systems in the year *y* (t). If the baseline wastewater treatment system is different from the project system, it will be estimated using the monitored amount of dry matter in the final sludge generated by the project activity ($S_{final,PJ,y}$) corrected for the sludge generation ratios of the project and baseline systems as per equation 5 in AMS-III.H
	$MCF_{s,BL,final}$	Methane correction factor of the disposal site that receives the final sludge in the baseline situation, estimated as per the procedures described in the "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site"
	UF_{BL}	Model correction factor to account for model uncertainties (0.89)
	Hence, the validation team concluded that the equation to be applied is in line	

	with AMS-III.H methodology

As described in the PoA-DD clearly in Section B.6.1 Part II, the baseline emissions would be determined also according paragraph 26 of AMS-III.H

a) Existing waste water treatment plant that has been operating for at least three years and if one year of historical data is not available, the procedures outlined in AMS-III.H paragraph 27 will be followed
b) In the case of Greenfield and capacity addition projects, or existing plant without three year operating history, the procedures outlined in AMS-III.H paragraph 28 will be followed

The above conditions would be applied for each CPA & this is accepted by the validation team

AMS-I.D

1.2) Carbon dioxide (CO_2) emissions from the displaced electricity supplied to the Indonesian national grid (fossil fuels based power plants in the Indonesian national grid)

The baseline emission is calculated as the generated electricity from the renewable generating unit that displaces the electricity in the Indonesian national grid, multiplied by Indonesian grid emission factor as per the formula

$$BE_{grid,\,y} = EG_y * EF_{CO2}$$

Where,

$BE_{grid,\,y}$ = Baseline emissions due to the electricity displacement in the year y (tCO2e)

EG_y = Quantity of net electricity supplied to the grid in the year y (MWh)

$EF_{grid,CM,y}$ = CO_2 emission factor of the grid in year y (tCO_2/MWh)

Included baseline emission source	Validation team's conclusion
MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor (measured in tCO_2/MWh) of the Indonesian national grid	As captured biogas will be used to generate electricity for export to the national grid (for CPA implemented under scenario 1 / 2 + scenario E), inclusion of this baseline emission source is appropriate.

EG_y estimation method will specified for each CPA. The ex-ante emission factor of the Indonesian national grid (EF_{CO2}) will be calculated according to the Tool to calculate the emission factor for an electricity system version 02.2.1, EB 63, Annex 19 /B05/ and will be documented transparently in specific CPA-DD. This is accepted by the validation team

In the PoA-DD, both options of paragraph 12, AMS-I.D /B04/ will be considered to calculate the grid emission factor:
The emission factor can be calculated in a transparent and conservative manner as follows:
(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the Tool to calculate the Emission Factor for an electricity system.; OR
(b) The weighted average emissions (in t CO_2/MWh) of the current generation mix. The data of the year in which project generation occurs must be used.

B. Project Emissions

Project emissions from the project activity may consist of:

$$PE_{methane,y} = \left\{ \begin{matrix} PE_{power,y} + PE_{ww,treatment,y} + PE_{s,treatment,y} + PE_{ww,discharge,y} + PE_{s,final,y} + \\ PE_{fugitive,y} + PE_{biomass,y} + PE_{flaring,y} \end{matrix} \right\}$$

$PE_{methane,\,y}$ = Project activity emissions in the year y (tCO_2e)

$PE_{power,y}$	=	CO_2 emissions from electricity and fossil fuel by the project activity (tCO_2e)
$PE_{ww,treatment,y}$	=	Methane emissions from wastewater treatment system, not equipped by biogas recovery (tCO_2e)
$PE_{s,treatment,y}$	=	Methane emissions from sludge treatment systems, not equipped with biogas recovery (tCO_2e)
$PE_{ww,discharge,y}$	=	Methane emissions due to inefficiency of project activity wastewater treatment system (tCO_2e)
$PE_{s,final,y}$	=	Methane emissions from the decay of the final sludge generated by the project activity treatment system (tCO_2e)
$PE_{fugitive,y}$	=	Methane fugitive emissions due to inefficiencies in capture system (tCO_2e)
$PE_{flaring,y}$	=	Methane emissions due to incomplete flaring (tCO_2e)
$PE_{biomass,y}$	=	Methane emissions from biomass stored under anaerobic conditions which not occurred in baseline situation (tCO_2e)

The following project emissions as specified in AMS-III.H version 16 /B04/ paragraph 29 that have been included and excluded from the project emissions estimation including the validation team's conclusion:

Included project emission source	**Validation team's conclusion**	
CO_2 emissions from electricity and fuel used by the project activity facilities ($PE_{power,y}$)	The PoA-DD had considered both electricity & fossil fuel consumption in the project emissions as applicable & to be specified clearly in each CPA its applicability. The emission on the account of electricity ($PE_{power,y}$ = $PE_{EC,y}$) consumption will be calculated in accordance with the Tool to calculate baseline, project and/or leakage emissions from electricity consumption, Version 01, EB 39, Annex 7 /B17/ The following equations have been defined in the PoA-DD in order to determine the project emisisons from electricity & fuel used $PE_{EC,y} = \sum_j EC_{PJ,j,y} \times EF_{EL,j,y} \times (1 + TDL_{j,y})$ Where:	
	$PE_{EC,y}$	Project emissions from electricity consumption in year y (tCO2e/yr)
	$EC_{PJ,j,y}$	Quantity of electricity consumed by the project electricity consumption source j in year y (MWh/yr)
	$EF_{EL,j,y}$	Emission factor for electricity generation for source j in year y (tCO_2/MWh)
	$TDL_{j,y}$	Average technical transmission and distribution losses for providing electricity to source j in year y
	According to the PoA-DD, The emission from fossil fuel combustion ($PE_{FC,y}$) will be calculated using the latest approved version of the Tool to calculate project or leakage CO2 emissions from fossil fuel combustion", Version 02, EB 41, Annex 11 /B06/ $PE_{FC,j,y} = \sum_i FC_{i,j,y} \times COEF_{i,y}$ Where	
	$PE_{FC,j,y}$	CO_2 emissions from fossil fuel combustion in process j

		during year *y*(t CO_2e/yr)
	$FC_{i,j,y}$	Is the quantity of fuel type *i* combusted in process *j* during year *y* (mass or volume unit/year)
	$COEF_{i,y}$	Is the CO_2 coefficient of fuel type *i* in year *j*(t CO_2/mass or volume unit)
	i	Are the fuel types combusted in process *j* during the year *y*
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions from wastewater treatment system affected by the project activity, and not equipped with biogas recovery ($PE_{ww,treatment,y}$)	Emissions from wastewater treatment - Important emission source in case of wastewater treatment plants. This is correct & applicable for each CPA by the validation team According to the PoA-DD, $PE_{ww,treatment,y}$ will be determined as per equation 2 in paragraph 20 of AMS-III.H using an uncertainty factor of 1.12 and data applicable to the project situation ($MCF_{ww,treatment,PJ,k}$ and $\eta_{,PJ,k,y}$) and with the following changed definition of parameters:	
	$MCF_{ww,treatment,PJ,k}$	Methane correction factor for project wastewater treatment system *k* (*MCF* values as per Table III.H.1)
	$\eta_{,PJ,k,}$	Chemical oxygen demand removal efficiency of the project wastewater treatment system *k* in year *y* (t/m^3), measured based on inflow COD and outflow COD in system *k*
	$MCF_{ww,treatment,PJ,k}$	Methane correction factor for project wastewater treatment system *k* (*MCF* values as per Table III.H.1)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions on account of inefficiency of the project activity wastewater treatment systems and presence of degradable organic carbon in treated wastewater ($PE_{y,ww,discharge}$)	Emissions from the discharge of the effluent into river/lake/sea - Important emission source in case of wastewater discharge to sea/river/lake. This is correct & applicable to be considered for each CPA by the validation team According to the PoA-DD, $PE_{y,ww,discharge}$ will be determined as per equation 6 in paragraph 24, using an uncertainty factor of 1.12 and data applicable to the project conditions ($COD_{ww,discharge,PJ,y}$, $MCF_{ww,PJ,discharge}$) and with the following changed definition of parameters:	
	$COD_{ww,dischargePJ,y}$	Chemical oxygen demand of the treated wastewater discharged into the sea, river or lake in the project scenario in year *y* (t/m^3)
	$MCF_{ww,PJ,discharge}$	Methane correction factor based on the discharge pathway of the wastewater in the project scenario (e.g. into sea, river or lake) (*MCF* values as per Table III.H.1)
	$COD_{ww,dischargePJ,y}$	Chemical oxygen demand of the treated wastewater discharged into the sea, river or lake in the project scenario in year *y* (t/m^3)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 fugitive emissions on account of inefficiencies in the capture systems ($PE_{fugitive,y}$)	Emissions from biogas release in capture system - Inefficiency in methane capture in the anaerobic digesters may contribute to methane emissions from biogas systems. This is correct & applicable to be considered for each CPA by the	

	validation team According to the PoA-DD, $PE_{fugitive,y}$ will be determined as per paragraph 30 of AMS-III.H $PE_{fugitive,y} = PE_{fugitive,ww,y} + PE_{fugitive,s,y}$ Where	
	$PE_{fugitive,ww,y}$	Fugitive emissions through capture inefficiencies in the anaerobic wastewater treatment systems in the year *y* (tCO_2e)
	$PE_{fugitive,s,y}$	Fugitive emissions through capture inefficiencies in the anaerobic sludge treatment systems in the year *y* (tCO_2e)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions due to incomplete flaring ($PE_{flaring,y}$)	Emissions due to incomplete flaring of biogas - May be an important source of emission. Incomplete combustion of biogas due to efficiency of flaring system leads to fugitive emission of methane. This is correct & applicable to be considered for each CPA by the validation team According to the PoA-DD, $PE_{flaring,y}$ will be determined as follows: For *ex ante* estimation, baseline emission calculation for wastewater and/or sludge treatment (i.e. equation 2 and/or equation 3 of AMS-III.H) can be used but without the consideration of GWP for CH4. For *ex post* emission reduction shall be calculated as per the Tool to determine project emissions from flaring gases containing methane, EB 28, Annex 13 /B22/ by using actual monitored data $PE_{flaring,y} = \sum_i (Q_{ww,i,y} * COD_{\inf low,i,y} * \eta_{COD,BL,i} * MCF_{ww,treatment,BL,i}) * B_{o,ww} * UF_{BL}$ Where	
	$Q_{ww,i,y}$	Volume of wastewater treated in baseline wastewater treatment system *i* in year *y* (m^3). For *ex ante* estimation, forecasted wastewater generation volume or the designed capacity of the wastewater treatment facility can be used. However, the *ex post* emissions reduction calculation shall be based on the actual monitored volume of treated wastewater
	$COD_{\inf low,i,y}$	Chemical oxygen demand of the wastewater inflow to the baseline treatment system *i* in year *y* (t/m^3). Average value may be used through sampling with the confidence/precision level 90/10
	$\eta_{COD,BL,i}$	COD removal efficiency of the baseline treatment system *i*, determined as per the paragraphs 26, 27 or 28 of AMS-III.H
	$MCF_{ww,treatment,BL}$	Methane correction factor for baseline wastewater treatment systems *i* (*MCF* values as per Table III.H.1)
	i	Index for baseline wastewater treatment system
	$B_{o,ww}$	Methane producing capacity of the wastewater (IPCC value of 0.25 kg CH_4/kg COD)

	UF_{BL}	Model correction factor to account for model uncertainties (0.89)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	

Excluded project emission source	**Validation team's conclusion**	
CH_4 emissions from sludge treatment systems affected by the project activity, and not equipped with biogas recovery ($PE_{s,treatment,y}$)	According to the PoA-DD, $PE_{s,treatment,y}$ will be determined as per equation 3 and 4 in paragraph 22 of AMS-III.H, using an uncertainty factor of 1.12 and data applicable to the project situation ($S_{l,PJ,y}$, $MCF_{s,treatment,l}$) and with the following changed definition of parameters:	
	$S_{l,PJ,y}$	Amount of dry matter in the sludge treated by the sludge treatment system *l* in the project scenario in year *y* (t)
	$MCF_{s,treatment,l}$	Methane correction factor for the project sludge treatment system l (*MCF* values as per Table III.H.1)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions from the decay of the final sludge generated by the project activity treatment systems ($PE_{s,final,y}$)	According to the PoA-DD, $PE_{s,treatment,y}$ will be determined as per equation 7 in paragraph 25 of AMS-III.H, using an uncertainty factor of 1.12 and data applicable to the project conditions ($MCF_{s,PJ,final}$, $S_{final,PJ,y}$). If the sludge is controlled combusted, disposed in a landfill with biogas recovery, or used for soil application in aerobic conditions in the project activity, this term shall be neglected, and the sludge treatment and/or use and/or final disposal shall be monitored during the crediting period with the following revised definition of the parameters:	
	$MCF_{s,PJ,final}$	Methane correction factor of the disposal site that receives the final sludge in the project situation, estimated as per the procedures described in the "Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site"
	$S_{final,PJ,y}$	Amount of dry matter in final sludge generated by the project wastewater treatment systems in the year *y* (t)
	Hence, the validation team concluded that the equation to be applied is in line with AMS-III.H methodology	
CH_4 emissions from biomass stored under anaerobic conditions which would not have occurred in the baseline situation ($PE_{biomass,y}$)	According to the PoA-DD, $PE_{biomass,y}$ will be determined if storage of biomass under anaerobic conditions takes place in the project and does not occur in the baseline , methane emissions due to anaerobic decay of this biomass shall be considered and be determined as per the procedure in the Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site. (tCO2e) Hence, the validation team concluded this is in line with AMS-III.H methodology	

C. Leakage

As per the applied methodologies, the leakage is not relevant to the CPAs as there are no transfer of equipment's occurs due to the project activity.

However, the PoA-DD also have included the provisions for PoA – according to paragraph 38 of AMS-III.H & 27 of AMS-I.D which will be considered & included at each CPA to be included

This is in line with the methodology requirements & has been considered accordingly

D. Emission Reduction

Calculation of the greenhouse gases emission reduction has been correctly and transparently documented in the PoA-DD /P02/ and the emission reduction calculation spreadsheet (demonstrated at specific CPA level /P07/.

It was verified that the methodologies have been applied correctly to calculate project emissions, baseline emissions, leakage emissions and emission reductions through the appropriate application of ex-ante values, default values and uncertainty factors. All the emissions of baseline emissions can be replicated using information provided in the PoA-DD. Furthermore, the validation team considers that the greenhouse gas emissions occurring within the project activity boundary as for the project implementation and are not addressed by the applied methodologies (AMS-III.H version 16 and AMS-I.D version 17 is contributed less than 1% of the estimated annual emission reductions.

In summary, the calculation of emission reductions was correctly demonstrated by the PP according to the methodology AMS-III.H, "Methane recovery in wastewater treatment", Version 16 /B04/ & AMS-I.D, "Grid connected renewable electricity generation", Version 17 /B04/ along with the applicable tools as follows:

1. Tool to determine project emissions from flaring gases containing methane /B22/
2. Tool to calculate baseline, project and/or leakage emissions from electricity consumption /B17/
3. Tool to calculate the emission factor for an electricity system /B05/
4. Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /B06/

The table below summarized the applicability and justification of the project activity's emission reduction:

All assumptions made for estimating GHG are listed in the PoA-PDD	☒ Yes ☐ No	As per PoA-PDD Part II, Section B.6.1
All data used by project participants are listed in the PoA-PDD	☒ Yes ☐ No	As per PoA-PDD Part II, Section B.6.1
Their references and sources are also listed in the PoA-PDD	☒ Yes ☐ No	As per PoA-PDD Part II, Section B.6.1
Formulas, parameters, values are complete, accurate, transparent and conservative	☒ Yes ☐ No	As per PoA-PDD Part II, Section B.6.1
All the references and documents used are correctly quoted and conservatively interpreted in the PoA-PDD	☒ Yes ☐ No	As per PoA-PDD Part II, Section B.6.1
Methodology has been applied correctly to calculate project emissions, baseline emissions, leakage emissions and emission reductions	☒ Yes ☐ No	As per AMS-III.H & AMS-I.D /B04/ & methodological tool as follows: 1. Tool to determine project emissions from flaring gases containing methane /B22/ 2. Tool to calculate baseline, project and/or leakage emissions from electricity consumption /B17/ 3. Tool to calculate the emission factor for an electricity system /B05/ 4. Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /B06/
All the emissions of baseline emissions can be replicated using information provided in the PoA-PDD	☒ Yes ☐ No	The baseline emissions can be replicated using the information in the PDD section B.6.3

3.10 Monitoring Plan for a typical CPA

Validation Opinion:

VVS paragraph 131 to 133, 198

See also Section 3.6 of this report

The monitoring plan presented in the PoA-PDD Part II, Section B.7.1 complies with the requirements of methodologies /B04/, through cross checking of all parameters stipulated in the monitoring plan.

According to the document review in PoA-PDD, detailed monitoring procedures, monitoring structure, monitoring items & functions are clearly demonstrated in the PDD which enable the monitoring plan to implemented feasibly

Interview with the project participant & consultant has allowed the validation team to confirm that the monitoring plan defined in the PDD is feasible to be implemented.

3.10.1 Parameters determined ex-ante

Validation Opinion:

VVS paragraph 131 to 133, 198

The following data and parameters were available during the validation and will remain fixed ex-ante throughout the crediting period:

Parameter	Value	Means of Validation
$EF_{CO2,grid,y}$	To be specified for each CPA	Confirmed in accordance with AMS-I.D requirements
$MCF_{ww,treatment,BL,i}$	Will be based on type of the wastewater treatment system in the baseline scenario of each CPA	Confirmed in accordance with AMS-III.H requirements
$B_{o,ww}$	0.25	Confirmed in accordance with AMS-III.H requirements
UF_{BL}	0.89	Confirmed in accordance with AMS-III.H requirements
GWP_{CH4}	21	Confirmed in accordance with AMS-III.H requirements
DOC_s	Wet basis: 0.09 Dry basis: 0.257	Confirmed in accordance with AMS-III.H requirements
DOC_F	0.5	Confirmed in accordance with AMS-III.H requirements
F	0.5	Confirmed in accordance with AMS-III.H requirements
$MCF_{ww,BL,discharge}$	Will be based on type of the discharge pathway in the baseline wastewater treatment system of each CPA	Confirmed in accordance with AMS-III.H requirements
$COD_{ww,discharge,BL,y}$	To be determined based on nature of CPA.	Confirmed in accordance with AMS-III.H requirements
$MCF_{s,BL,final}$	Will be based on type of sludge disposal site in the baseline scenario of each CPA	Confirmed in accordance with AMS-III.H requirements
$\eta_{COD,BL,i}$	To be determined for each CPA	Confirmed in accordance with AMS-III.H requirements
$S_{final,BL,y}$	To be determined for each CPA	Confirmed in accordance with AMS-III.H requirements
DF	0.89	Confirmed in accordance with AMS-III.H requirements

$MCF_{ww,treatment\ PJ,k}$	Will be based on type of wastewater treatment of each CPA	Confirmed in accordance with AMS-III.H requirements
$MCF_{ww,treatment\ PJ,i}$	Will be based on type of wastewater treatment of each CPA	Confirmed in accordance with AMS-III.H requirements
UF_{PJ}	1.12	Confirmed in accordance with AMS-III.H requirements
$MCF_{ww,PJ,discharge}$	Will be based on the discharge pathway of wastewater treatment system of each CPA	Confirmed in accordance with AMS-III.H requirements
$MCF_{s,PJ,final}$	Will be based on the sludge disposal site in the project scenario of each CPA	Confirmed in accordance with AMS-III.H requirements
CFE_{ww}	0.9	Confirmed in accordance with AMS-III.H requirements
$\eta_{COD,PJ,j}$	Will be based on the technology installed in the CPA	Confirmed in accordance with AMS-III.H requirements
$\rho_{CH4,n,h}$	0.716	Confirmed in accordance with AMS-III.H requirements

The validation team has verified the value used against the sources & conclude that all relevant parameters to calculate the GHG emissions reductions of the project have been sufficiently considered, real, measurable & conservative.

3.10.2 Parameters monitored ex-post

Validation Opinion:

VVS paragraph 131 to 133, 198

The baseline and project emission parameters that are monitored ex-post are indicated in Section Part II, Section B.7.1 of the PoA-PDD are as follows:

1. Quantity of net electricity supplied to the grid in year y, **$EG_{facility,y}$**
2. The flow of wastewater, $Q_{ww,i,y}$
3. The chemical oxygen demand of the wastewater before and after the treatment system affected by the project activity, **$COD_{ww,untreated,y}$**
4. Chemical oxygen demand of the treated wastewater leaving the project treatment system, **$COD_{ww,treated,y}$**
5. Chemical oxygen demand of the untreated wastewater entering the wastewater treatment systems affected by the project activity, **$COD_{PJ,inflow,k}$**
6. Chemical oxygen demand of the treated wastewater leaving the wastewater treatment systems affected by the project activity and not equipped with biogas recovery in year y, **$COD_{PJ,outflow,k}$**
7. Chemical oxygen demand of the treated wastewater discharged to river/water/lake, **$COD_{ww,discharge,y}$**
8. Amount of dry matter in final sludge, **$S_{final,PJ,y}$**
9. Annual volume of biogas combusted in year *y,* **$BG_{burnt,y}$**
10. Flare efficiency in year *y* (fraction), $\eta_{flare,h}$
11. Methane content in biogas in year *y,* $w_{CH4,y}$
12. Temperature of the biogas recovered, T
13. Pressure of the biogas, P
14. Volumetric fraction of component i in the residual gas in the hour h where i = CH_4 , CO, CO_2 , O_2, H_2 , N_2, $fv_{i,h}$
15. Volumetric flow rate of the residual gas in dry basis at normal conditions in the hour h, **$FV_{RG,h}$**
16. Temperature in the exhaust gas of the flare, **T_{flare}**
17. **Other flare operation parameters** - This should include all data and parameters that are required to monitor whether the flare operates within the range of operating conditions according to the manufacturer's specifications including a flame detector in case of open flares.

18. Average technical transmission and distribution losses for providing electricity to source *j/k* in year *y*, $\mathbf{TDL_{j,y}}$; $\mathbf{TDL_{k,y}}$
19. Quantity of electricity consumed by the project consumption source *j* in the year *y*, $\mathbf{EC_{PJ,j,y}}$
20. Quantity of fossil fuel combusted in process j during year *y*, $\mathbf{FC_{DIESEL,j,y}}$; $\mathbf{FC_{FO,j,y}}$; $\mathbf{FC_{COAL,j,y}}$
21. Weighted average net calorific value of the fossil fuel consumed in year *y*, $\mathbf{NCV_{DIESEL,y}}$; $\mathbf{NCV_{FO,y}}$; $\mathbf{NCV_{COAL,y}}$
22. Weighted average CO_2 emission factor of fuel type *diesel; Fuel Oil; Coal* in year y, $EF_{CO2,DIESEL,y}$; $EF_{CO2,FO,y}$; $EF_{CO2,COAL,y}$
23. Sludge from anaerobic digesters in project scenario, **End use of sludge**

The monitoring of emission reductions generated by the project activity will be carried out systematically according to the monitoring plan. All relevant parameters are monitored closely as required by methodology throughout the project activity implementation.

All parameters required by the methodology including the accuracy of the measurement have been included in the PoA-PDD Part II, Section B.7.1.

All monitoring data will be electronically archived for a period of 2 years after crediting period.

Monitoring of leakage emissions is not required as the project equipment's are not transferred from another project activity

3.10.3 Management system and quality assurance

Validation Opinion:

VVS paragraph 132

The DOE validation team has assessed the proposed management system and how does the quality will be assured in the proposed project activity. The outline of the operational procedure was briefly described in the PoA-PDD. The operational procedure will be updated by the project participant as required during the operation of the project activity. The monitoring and recording of the required parameters will be carried out by trained personnel who will be managed by the operator of the power plant

The aspects related to the monitoring plan are addressed as the following:

i) Operation & Management Structure for monitoring
ii) Quality Assurance & Quality Control (QA/QC) which includes also requirements for calibration
iii) Reporting, archiving & preparation for periodic verification
iv) Procedures in case of damaged metering equipment / emergencies

All measurements will use calibrated measurement equipment that will be maintained regularly and checked for its functioning.

Hence, all indicators of importance for controlling and reporting of projects performance have been incorporated in the monitoring plan as well as indicated in the planned formal set of monitoring protocol and work instructions.
The validation team has also reviewed the process to monitor emission reductions as described in the PoA-PDD Part II, Section B.7.1 & confirmed that the designated personnel & their responsibility have been defined clearly with respect to key monitoring features.
The application of the monitoring methodology is transparent and the validation team considers the project participants able to implement the monitoring plan

3.11 Sustainable Development

Validation Opinion:

VVS paragraph 50 to 52

The host country DNA requires the project activity to be developed in sustainable development manner. The validation team has reviewed the letter of approval issued by the DNA of Indonesia /P03/ & confirmed that the project activity will contribute to sustainable development.

According to the PoA-DD Section A.2
The contribution of the PoA to sustainable development in the country will be:
a) Environmental sustainability
b) Economic sustainability
c) Social sustainability
d) Technological sustainability
The validation team confirmed the contribution to sustainable development and the descrptions in the PoA-DD is in line with the host country sustainable development criteria

3.12 Environmental Impacts (at CPA level)

Validation Opinion:

VVS paragraph 134 to 137, 199 to 200

According to the PoA-DD, the environmental impact analysis will be conducted at CPA-level. According to the PoA-DD, a typical of CPA under this PoA involves installation of an anaerobic digester equipped with methane recovery system as the wastewater treatment unit of a facility.
The validation team reviewed Decree of the Minister of the Environment (MENLH No.11/2006) /P12/ which prescribes the businesses and/or activities of various sectors which require an Environmental Impact Assessment (EIA).
The validation team has confirmed with the local expert that there is no requirement for the wastewater treatment unit of a facility to conduct an EIA as per the aforementioned regulation. Therefore, any CPA under this PoA will not be required to conduct an EIA.
However, in case CPA utilizes biogas for power generation, their capacity will have a maximum installed capacity of 15 MW. Based on the Decree of the Minister of the Environment (MENLH No.11/2006) of Indonesia /P12/, such renewable energy project with a capacity less than 50 MW is not required to prepare an Environmental Impact Assessment (hereinafter referred to as EIA).
All proposed businesses or activities which are not expected to have significant impacts and/or for which suitable technology exists for management of significant impacts shall implement Environmental Management Procedures (UKL/ Upaya Pengelolaan Lingkungan) and Environmental Monitoring Procedures (UPL/Upaya Pemantauan Lingkungan) in accordance with applicable laws and regulations.
Therefore, CPA implementers are not required to prepare an EIA report, but shall prepare UKL/UPL instead in order to comply with the requirement set by the MENLH No.11/2006.

Hence, it is deemed appropriate for the environmental impacts analysis to be conducted at CPA level

Hence, the validation team has assessed the specific case CPA 1.1 – Maris – PTPN VII Biogas Project & the summary of the validation opinions are listed in the separate validation report. See validation report for specific case CPA 1.1 – Maris – PTPN VII Biogas Project

3.13 Local Stakeholder Consultation (at PoA level)

Validation Opinion:

VVS paragraph 138 to 140, 201 to 202

CME has conducted the local stakeholder consultation for the PoA at PoA level. Furthermore, it has been stated in the PoA DD, that the subsequent CPAs of the PoA shall do the local stakeholders consultation at CPA level. This is one of the eligibility criteria; hence this is deemed as acceptable to the validation team and confirms the requirement of the PoA.

3.14 Comments by Parties, Stakeholders and NGOs

Validation Opinion:

The PoA-PDD [initially published version], Version 01, Date: 22-05-2012 & the Specific CPA-DD [initially published version], Version 01, Date: 22-05-2012 were made publicly available on UNFCCC CDM website:

http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/3XNAZBFBKNOTWIUN5PBVG6NIIV4AT9/view.html

from 25 May 12 - 23 Jun 12 in order to invite comments from public stakeholders.

No public comments have been received during that period

Appendix A

THE VALIDATION PROTOCOL FOR CDM PROGRAMME OF ACTIVITIES

based on CDM Validation and Verification Standard, Annex 3 of EB 70 report, Version 03.0

BWC Sustainable Biogas Recovery Programme of Activities in Indonesia

Report No. 01 997 9105070303-1/2

Version No. 1.1

Table 1: CDM-SSC-POA-DD Requirements Checklist ((based on § 37 of the CDM Modalities and Procedures and on VVS ver 03.0, Annex 3 of EB70 Ref and EB 70 Annex 5 - PoA specific)				
Checklist	**Comment**	**Ref.**	**Draft Concl.**	**Final Conc.**
A. General Description of the Programme of Activities				
A.1. Title of the PoA				
A.1.1.Are title, version number and the date of completion of PoA DD given in section A.1 of the PoA-DD?	Yes, title, current version number and the date of document completion has been provided in section A.1 of the PoA DD.	PoA DD	OK	OK
A.2. Description of the PoA				
A.2.1.Has PoA DD in section A.2 contains a sufficient description of general operating and implementing framework of the proposed PoA? (Ref: § 189 of EB 70 Annex 3)	Yes, this has been sufficiently explained in Section A.2	PoA DD	OK	OK
A.2.2. Has PoA DD in section A.2 contains the description of the policy/measure or stated goal that the PoA seeks to promote in a transparent manner with sufficient reference of the policy/measure/stated goal if any?	The CME has provided the description of the policy/measure or stated goal of the PoA in section A.2 of the PoA DD.	PoA DD	OK	OK
A.2.3.Has a confirmation was given that the proposed PoA is a voluntary action by the coordinating/managing entity?	Yes, the CME has provided confirmation that proposed PoA is a voluntary measure by the CME; however the same is not supported by any reference.	PoA DD	OK	OK
A.2.4. Will the PoA create other environmental or social benefits than GHG emission reductions? (EB 70 Annex 3, §§ 50 – 52)	Yes	PoA DD	OK	OK
A.2.5.Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II? (EB 70 Annex 3, § 150)	Yes, the CPA of the PoA qualifies under small scale project activity.	PoA DD	OK	OK
A.2.6. Has the latest version of the CDM-POA DD form been applied? (EB 70 Annex 3, § 62)	Yes latest version of PoA DD template has been used	PoA DD	OK	OK

A.2.7. Has the CDM-POA-DD been duly filled in accordance with the latest guidance(s) and procedures and all information are consistently described?	Yes, PoA DD has not been complete in accordance with the latest available guidelines	PoA DD	OK	OK
A.3. CME and Participants of PoA				
A.3.1. Has the coordinating/managing entity obtained letters of approval for the implementation of the PoA from each Host Party and Annex I Party involved in the PoA?	Yes, letter of approvals have been obtained from Indonesia (host country) & Netherlands (Annex 1 country) by the CME for the implementation of the PoA	--	OK	OK
A.3.2.Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?	Yes, letter of approvals have been obtained from Indonesia (host country) & Netherlands (Annex 1 country) confirmed the corresponding party is the party to Kyoto Protocol	--	OK	OK
A.3.3. Are the approvals issued from organizations listed as DNAs on the UNFCCC CDM website? Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.	Yes, the approvals are issued from listed DNAs in the UNFCCC website. The received original copy of the LoAs from the project participants were compared with LoA of those registered CDM projects which have the same DNA. The LoAs were compared on the alignment, the standard format and signatory of the person who issued the letter & confirmed to be same. The validation team has confirmed these LoAs are authentic. The letter(s) of approval was also found to be unconditional with respect to paragraph 39 (a) to (d) of Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3 /B01/. The validation team concluded that these letter(s) are in accordance with paragraphs 39 - 42 of Clean Development Mechanism Validation and Verification Standard, Version 03.0, EB 70, Annex 3 /B01/	--	OK	OK

A.3.4. Do the written approvals confirm that the participation is voluntary?	Yes, the written approvals confirmed that the participation is voluntary	--	OK	OK
A.3.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country?	Yes, the written approval from the host country confirmed that the project contributes to the sustainable development in the country	--	OK	OK
A.3.6. Do the written approvals refer to the precise project title in the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number?	Yes, the written approvals refers to the precise project title in the PoA-DD submitted for registration	--	OK	OK
A.3.7. Are the written approvals unconditional with regard to A.3.2, A.3.4 to A.3.6?	Yes, the written approvals are unconditional	--	OK	OK
A.3.8. Has the coordinating/managing entity obtained letters of authorization of its coordination of the PoA from each Host Party? *The authorizations for the coordination of the PoA can be granted vide the letters of approval from each Host Party.*	Yes, the written approvals received are the also the authorization for coordination of the PoA from the host party	--	OK	OK
A.3.9. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PoA-DD internally consistent to each other?	Yes, the information regarding the project participants listed in Section A3 and Annex 1 of the PoA-DD are consistent	--	OK	OK
A.3.10. Has the participation to the PoA of each project participant listed in the PoA-DD been approved by at least one Party involved? *Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol. Describe the means of validation employed to draw this conclusion.*	Yes, the participation to the PoA for each project participant listed in the PoA-DD has been approved by the host party	--	OK	OK
A.3.11. Are there any other project participants approved but not listed in the PoA DD?	No, not applicable	--	OK	OK
A.4. Technical description of the PoA				

A.4.1. Location of PoA				
A.4.1.1. Has the location of the PoA been correctly described?	Yes, the location has described correctly	PoA DD	OK	OK
A.4.1.2. Host parties				
A.4.1.2.1. Have all host countries been correctly listed?	Yes, the host country is Indonesia	PoA DD	OK	OK
A.4.1.2.2. Is there any Party directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD?	Yes, Annex 1 party involved & the contact details have been added in Annex 1 of the PoA-DD i.e. Netherlands	PoA DD	OK	OK
A.4.1.3. Physical / Geographical properties				
A.4.1.3.1. Does the CDM-POA-DD include a definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented? (Ref : § 191 of EB 70 Annex 3)	Yes, the PoA DD mentions definition of project boundary in terms of geographical as Indonesia in PoA DD.	PoA DD	OK	OK
A.4.1.3.2. Are all applicable national and/or sectoral policies and regulations within that chosen boundary reflected in the determination of the baseline? (Ref : § 192 of EB 70 Annex 3)	Yes, this has been included clearly in the PoA DD	PoA DD	OK	OK
A.4.2. Description of a typical CPA				
A.4.2.1. Description/ Technology or measures to be employed by the CPA				
A.4.2.1.1. Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used? ((Ref : § 16(c) of EB 70 Annex 5)	Yes, the PoA-DD has described clearly, accurately & complete descriptions of the CPAs for the technology / measures	PoA DD	OK	OK
A.4.2.1.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	For the technology or measures to be employed by each CPA, the validation team had found that the PoA-DD had mentioned	PoA DD	OK	OK

A.4.2.2. Eligibility criteria for inclusion of a CPA				
A.4.2.2.1. Has the definition of eligibility criteria for inclusion of a CPA under the PoA included the following information: • appropriate criteria for demonstration of additionality of the CPA, and • all type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility? (Ref : § 16 of EB 70 Annex 5 and § 196 of EB 70, Annex 3)	See Section 3.4 of the validation report Yes, the eligibility criteria has been determined in line with the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5 /B14/	PoA DD	OK	OK
A.4.3. Assessment and Demonstration of Additionality				
A.4.3.1.Has the PoA demonstrated that in the absence of the CDM one of the following would have occurred: • the proposed voluntary measure would not be implemented, or • the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country / region, or • that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.	Yes, POA DD contains information on the demonstration of additionality on PoA level	PoA DD	OK	OK
A.4.4. Operational, management and monitoring plan				
A.4.4.1. Operational and management plan				
A.4.4.1.1. Has the coordinating/managing entity established the operational and management arrangements for the implementation of the PoA, which includes a record keeping system for each CPA under the PoA? (Ref : § 17 of EB 70 Annex 5 and § 186 of EB 70, Annex 3)	Yes, the CME has established the operational and management structures for the implementation of the PoA in section C of the PoA DD	PoA DD	OK	OK
A.4.4.1.2. Are procedures identified for data management?	Yes procedures for has been identified for data management.	PoA DD	OK	OK
A.4.4.1.3. Has the arrangements included a system/procedure to avoid double accounting, e.g., provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the	Yes, the PoA DD in section C provides information to avoid double check	PoA DD	OK	OK

PoA? (Ref : § 17 of EB 70 Annex 5)				
A.4.4.1.4. Is the small scale project activity not a debundled component of a larger project activity? (Ref: EB 70 Annex 3, § 203)	The CME had defined the requirements for debundling assessment to ensure that the proposed CPA is not a debundled component of a large scale activity in the PoA-DD Section C, according to the Guidance for determining the occurrence of de-bundling under a Programme of Activity (Version 03, EB 54, Annex 13)	PoA DD	OK	OK
A.4.4.1.5. Has the CME made provisions to ensure that the CPA operators are aware of and have agreed that their activity is being subscribed to the PoA?	Yes, this is defined at the PoA-DD Section C	PoA DD	OK	OK
A.4.4.2. Monitoring plan				
A.4.4.2.1. If the coordinating /managing entity does not wish to have all CPAs verified, has a description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the CPA GHG emission reductions been provided? (Ref: § 16(j) EB 70 Annex 5)	The CME has opted to verify for each CPA	PoA DD	OK	OK
A.4.4.2.2. In case each CPA shall be verified, is there a transparent system in place that a) the verification status can be determined any time for each CPA and b) no double-accounting of ER occurs?	Yes, this has been defined in PoA-DD Section C	PoA DD	OK	OK
A.4.5. Public funding of the PoA				
A.4.5.1. Is there a confirmation that official development assistance has not been diverted to the implementation of the PoA in case public funding is used? (Ref: § 16(h) EB 70 Annex 5)	According to Section A.7 of the PoA-DD and the on-site interview with the representative from PT Blue World Indonesia, there is no public funding will be received. A Declaration letter of no diversion of ODA by the CME, PT Blue World Indonesia dated 21 May 2012 /P11/ confirming there is no public funding received from Annex 1 country	PoA DD	OK	OK

B. Duration of the PoA				
B.1. Starting Date of the PoA				
B.1.1. What is the starting date of the PoA? Is it Reasonable?	The starting date of the PoA is 25/05/2012. The stating date is determined as the date on which the PoA was published for Global Stakeholder Consultation on the website of the UNFCCC	PoA DD	OK	OK
B.2. Length of the PoA *The length of the PoA shall be assessed*				
B.2.1. What is the length/lifetime of the PoA? Is it reasonable? *PoA duration should not exceeding 28 years (60 years for A/R) (Ref: § 197) EB 70 Annex 3)*	Yes the length of the PoA has been considered as 28 years which is reasonable and in line with *§ 197 of EB 70 Annex 3.*	PoA DD	OK	OK
C. Environmental Analysis				
C.1. Level of Analysis *The analysis shall be carried out either on PoA or CPA level*				
C.1.1.Has it been clearly indicated on which level i.e. PoA or CPA an environmental Analysis has been carried out or will be carried out? (Ref § 199 & 200 of EB 70 Annex 3)	Yes, it has been indicated that the environmental analysis will be done on CPA level	PoA DD	OK	OK
C.2. Documentation on the analysis of the environmental impacts *The analysis shall be assessed*				
C.2.1. Has an environmental analysis of the PoA as per requirements of the CDM modalities and procedures been undertaken and described in the CDM-POA-DD? (Ref: § 199 & 200 EB 70 Annex 3)	Not applicable, see comment above.	PoA DD	OK	OK
C.3. Environmental impact Analysis Requirements				
C.3.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?	Yes, related applicable local regulation (which has been described in detail in the PoA-DD) has been assessed with the participation of Indonesia local expert & confirmed the information presented in the PDD is valid	PoA DD	OK	OK

C.3.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved?	Not applicable, see comment above in C.2.	PoA DD	OK	OK
C.3.3. Are trans boundary environmental impacts considered in the analysis?	Not applicable, see comment above in C.2.	PoA DD	OK	OK
D. Stakeholders´ comments				
D.1. Level of Analysis				
D.1.1. Has it been clearly indicated on which level i.e. PoA or CPA stakeholder comments have been or will be invited?	Yes, according to the PoA DD, stakeholder's consultation will be done at CPA level.	PoA DD	OK	OK
D.2. Brief description how comments by local stakeholders have been invited and compiled.				
D.2.1. With regard to the PoA, how have local stakeholders' comments been invited prior to the publication of the DDs and summarized? If applicable, was due account taken of the comments received? (Ref: § 201 & 202 EB 70 Annex 3)	Not applicable, see comment above in D.1.1	PoA DD	OK	OK
D.3. Summary of the comments received				
D.3.1. With regard to the PoA, can the summary provided assessed as adequate?	Not applicable, see comment above in D.1.1	PoA DD	OK	OK
D.4. Report on how due account was taken of comments received				
D.4.1. With regard to the PoA, can the report provided assessed as adequate?	Not applicable, see comment above in D.1.1	PoA DD	OK	OK
D.4.2. With regard to the PoA, can the local stakeholder consultation process in general be assessed as adequate?	Not applicable, see comment above in D.1.1	PoA DD	OK	OK
E. Application of baseline and monitoring Methodology				
E.1. Title and reference of the methodology				
E.1.1. Does the PoA apply an approved and applicable CDM methodology and a valid version thereof?	Yes, the proposed PoA applied AMS-III.H, "Methane recovery in wastewater treatment", Version 16 AMS-I.D, "Grid connected renewable electricity generation", Version 17	PoA DD	OK	OK
E.2. Justification of the choice of the methodology				
E.2.1. Is the justification of the choice of an approved baseline and	Justification of the methodology choice has	PoA DD	OK	OK

monitoring methodology for the typical CPA sufficient? (Ref: § 16 (e) EB 70 Annex 5)	been justified in PoA-DD Section B.3, and this will be further demonstrated with the relevant evidences at CPA level			
E.2.2. Does a typical CPA apply a combination of approved methodologies? If so, has such combination been approved only once in accordance with "Procedures for approval of the application of multiple methodologies to a programme of activities"? (Ref: § 190 EB 70 Annex 3)	According to General Guidelines to SSC CDM methodologies, Version 19.0, EB 69, Annex 27 /B12/, paragraph 16 *"The following combinations of approved methodologies may be applied* ***without further assessment of cross effects:*** *(b) Combination of any one of the Type III methodologies where activities lead to generation of methane, (i.e.* ***AMS-III.H,*** *AMS-III.D, AMS-III.F and AMS-III.G),* ***with any one of the Type I methodologies for utilising the methane generated for generation of renewable energy****, (i.e. AMS-I.A, AMS-I.C,* ***AMS-I.D*** *and AMS-I.F).(approved at EB56);* **Since the PoA-DD involved only AMS-III.H (Type III) & AMS-I.D (Type I), this complies with the requirements of paragraph 16 above & hence, no cross effect assessments are conducted**	PoA DD	OK	OK
E.2.3. Does the typical CPA apply one of the approved small scale categories and any methodology and tool referred therein?	Yes, this is being complied The CDM programme activities under the PoA had correctly applied the approved methodologies: 1) AMS-III.H Version 16 /B04/ 2) AMS-I.D Version 17 /B04/ and the following methodology tools were applied: 1. Tool to determine project emissions from flaring gases containing methane /B22/ 2. Tool to calculate baseline, project and/or leakage emissions from	PoA DD	OK	OK

	electricity consumption /B17/ 3. Tool to calculate the emission factor for an electricity system /B05/ 4. Tool to calculate project or leakage CO2 emissions from fossil fuel combustion /B06/			
E.2.4. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled?	Yes, this are being fulfilled & would be evidenced via CPA level	PoA DD	OK	OK
E.3. Description of the sources and gases included in the boundary				
E.3.1. Are the CPA's spatial boundaries (geographical) of the CPAs to be included are clearly defined?	Yes, this has been defined clearly according to the methodology requirements	PoA DD	OK	OK
E.3.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?	Yes, all sources and GHGs are identified in the project boundary	PoA DD	OK	OK
E.3.3. In case the methodology allows choosing whether a source and/or gas are to be included, is the choice sufficiently explained and justified?	Yes, this is included & sufficiently explained & justified	PoA DD	OK	OK
E.4. Description of how the baseline scenario is identified and description of baseline scenario *The description shall be assessed*				
E.4.1. Does the PoA-DD make provisions to identify possible baseline scenarios to be been considered for CPAs?	PoA-DD Part II, Section B.4 has clearly stated that the baseline scenario is in accordance with the prescribed baseline scenario in the methodology	PoA DD	OK	OK
E.4.2. Does the PoA-DD make provisions to identify the list of all the alternatives? Is the list of alternatives complete?	Identification of alternatives are not required	PoA DD	OK	OK
E.4.3. Does the PoA-DD make provisions to identify the baseline scenario for each CPA?	Yes, in accordance with the procedure	PoA DD	OK	OK
E.4.4. Does the PoA-DD make provisions to identify the baseline scenario according to the methodology for each CPA?	Yes, in accordance to methodology	PoA DD	OK	OK

E.4.5. Does the PoA-DD make provisions that any plausible alternative scenario is not excluded?	Identification of alternatives are not required	PoA DD	OK	OK
E.4.6. Does the baseline alternatives sufficiently take into account relevant national and/or sectoral policies?	Identification of alternatives are not required	PoA DD	OK	OK
E.4.7. Are the provisions for the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	Identification of alternatives are not required	PoA DD	OK	OK
E.5. CPA additionality				
E.5.1. Assessment and demonstration of CPA additionality				
E.5.1.1. Does the PoA-DD makes provisions to describe the additionality justification, which follows the requirements of the applied methodology and/or other methodological tools?	This is a SSC project & hence the Guidelines on the Demonstration of Additionality of Small-Scale Project Activities, Version 09.0, EB 68, Annex 27 is being referred for additionality justification	PoA DD	OK	OK
E.5.2. Key criteria for assessment and demonstration of CPA additionality				
E.5.2.1. Which criteria have been established to assess the additionality of CPA under this PoA?	See E.5.1.1 above	PoA DD	OK	OK
E.5.2.2. Does the PoA-DD provide criteria to assess that the proposed CPA of the PoA would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?	Yes, this is demonstrated via the use of investment analysis guidelines & the PoA-DD has defined clearly the criteria in PoA-DD Part II, Section B.5	PoA DD	OK	OK
E.5.2.3.Is the type of investment analysis selected correctly?	Yes, the type of investment analysis has been correctly selected & defined in PoA-DD Section B.5	PoA DD	OK	OK
E.5.2.4. Is the selected financial indicator chosen and applied correctly, if applicable?	Since Project IRR & Equity IRR options are defined in the PoA-DD, this will be determined specifically at the CPA level & accepted by the validation team	PoA DD	OK	OK
E.5.2.5. If applicable, were the input values used in the investment analysis valid and applicable at the time of the investment decision and justified?	This will be evaluated at the CPA level	PoA DD	OK	OK

E.5.2.6. In CME proposes to use values from Feasibility Study Reports (FSR) is it possible to verify that the period between the FSR date and investment decision was reasonably short and FSR values did not change materially?	This will be evaluated at the CPA level	PoA DD	OK	OK
E.5.2.7. Is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants or some verifiable circumstances that have led to a change in the benchmark?	This will be evaluated at the CPA level	PoA DD	OK	OK
E.5.2.8. Is the Investment Analysis prepared in compliance with the latest version of the "Guidance on the Assessment of Investment Analysis" as provided by the CDM EB?	This will be evaluated at the CPA level	PoA DD	OK	OK
E.5.2.9. If applicable, Are there any issues addressed in the barrier analysis that have a clear impact on the financial viability of the project activity and that shall be assessed by an investment analysis?	Investment barrier – Approach B has been defined as one of the additionality approach & investment barrier has been selected to be demonstrated via investment analysis	PoA DD	OK	OK
E.5.2.10. If applicable, Do the listed barriers exist and is their existence substantiated? Note: (a) by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics and/or (b) by interviews with relevant individuals: including members of industry associations, government officials or local experts if necessary?	Not applicable – only investment barrier has been selected	PoA DD	OK	OK
E.5.2.11 Would any of the identified barriers prevent the implementation of the project activity but not equally prevent the implementation of the possible alternatives, in particular the implementation of the identified baseline scenario?	Not applicable – only investment barrier has been selected	PoA DD	OK	OK
E.5.2.12. Are the geographical boundaries for the common practice analysis identified correctly?	Since the CPA of the PA is a small scale project activity, common practice analysis is not required and not demonstrated in the PoA DD.	PoA DD	OK	OK
E.5.2.13. Does the PoA DD provides an explanation why this region was selected and deemed more appropriate and is this explanation traceable and reliable?	Since the CPA of the PA is a small scale project activity, common practice analysis is not required and not demonstrated in the PoA DD.	PoA DD	OK	OK

E.5.2.14 Are there similar operational project activities, other than CDM activities, “widely observed and commonly carried out” in the defined region? Note: Use official sources and local and industry expertise?	Since the CPA of the PA is a small scale project activity, common practice analysis is not required and not demonstrated in the PoA DD.	PoA DD	OK	OK
E.5.2.15. In case there are similar commercially operated project activities, other than CDM activities, already “widely observed and commonly carried out” in the defined region, are there essential distinctions between the CDM project activity and the other similar activities?	Since the CPA of the PA is a small scale project activity, common practice analysis is not required and not demonstrated in the PoA DD.	PoA DD	OK	OK
E.6. Estimation of Emission Reductions of CPA				
E.6.1. Explanation of methodological choices				
E.6.1.1. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?	Yes, this is applied & justified accordingly in the PoA-DD	PoA DD	OK	OK
E.6.2. Equations, including fixed parametric values used for ER calculation				
E.6.2.1. Are the equations applied correctly according to the applied approved methodology?	Yes, all equations applied are correct according to the methodology AMS-I.D & AMS-III.H	PoA DD	OK	OK
E.6.2.2. Have conservative assumptions been used when calculating the project emissions?	Yes, it is conservative	PoA DD	OK	OK
E.6.3. Data and parameters to be reported in the CPA-DD form				
E.6.3.1. Are provisions made to identify all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?	Yes, PoA DD under Part II, Section B.6.2 provides provisions of all data and parameters which remain fixed	PoA DD	OK	OK
E.6.3.2. Does the PoA-DD mention reasonable values for all ex-ante calculation / monitoring parameters?	Yes, PoA DD under Part II, Section B.6.2 provides the values for all ex-ante calculation / monitoring parameters	PoA DD	OK	OK
E.7. Application of the monitoring methodology and description of the monitoring plan				
E.7.1. Data and parameters to be monitored by each CPA				

E.7.1.1. Has the PoA DD contains monitoring parameters for the CPAs? Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology?	Yes, PoA DD in section B.7.1 provides list of parameters to be monitored by the CPAs of the PoA	PoA DD	OK	OK
E.7.1.2. Has the PoA DD provides all monitoring parameters as required by the applied methodology required to be implemented by CPA monitoring plan?	Yes, PoA DD under Part II, Section B.6.2 provides all monitoring parameters as required	PoA DD	OK	OK
E.7.2. Description of the monitoring plan for a SSC-CPA:				
E.7.2.1 Has PoA DD contains monitoring plan for a CPA in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor?	Yes the PoA DD contains monitoring plan to be employed by any CPA of the PoA	PoA DD	OK	OK
E.7.2.2. Are the QA/QC procedures described under monitoring appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified?	Yes the PoA DD contains QA / QC procedures & these are sufficiently described	PoA DD	OK	OK
E.7.2.3. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?	Equations to be used for ex-post emission reduction calculation has been described clearly in the PoA-DD Part II, Section B.6.3	PoA DD	OK	OK
E.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/ entity(ies)				
E.8.1. Have the dates of the completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/ entity (ies) appropriately mentioned?	N/A	PoA DD	OK	OK

Table 2: CDM-SSC-gCPA-DD Requirements Checklist (based on § 37 of the CDM Modalities and Procedures and on VVS ver 03.0, Annex 3 of EB 70 Ref and EB 70 Annex 5 - PoA specific)

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
A. General Description of small scale CDM project activity (CPA)					
A.1. Are title, current version number and the date of document completion given in section A.1 of the generic CPA-DD?	gCPA DD	DR	Yes, the version number & the date of the document is given in the generic CPA-DD, which is actually the PoA-DD since the generic CPA-DD is now contained in PoA-DD Part II	OK	OK
A.2. Has the latest version of the CDM-SSC-CPA-DD form been used? Has g CPA DD includes information as required by the g CPA DD template? Note: Refer UNFCCC website for latest template.	gCPA DD	DR	Yes, latest version of the CDM-SSC-CPA-DD form been used. The g CPA DD includes information as required by the g CPA DD template	OK	OK
A.3. Does the generic CPA-DD provides unique identification of a CPA? Has general description of the small-scale CPA been provided in the g CPA DD? (Ref : § 16 (b) of EB 70 Annex 5)	gCPA DD	DR	No, the generic CPA DD does not require to provide the information on the unique identification, this is required at specific CPA-DD	OK	OK
A.4 Has it been established that the CPA is within the geographical borders of the proposed PoA? (Ref: § 16 (a) of EB 70 Annex 5) Note: Geographical Boundary of CPA can be in more than one DNA.	gCPA DD	DR	Yes it has been demonstrated that the geographical borders of any CPA in this PoA will be within Indonesia	OK	OK
A.5. Whether information on the Parties and CPA implementers which are participating in the CPA has been provided in the CPA DD? Are all host parties specified in the generic CPA-DD?	gCPA DD	DR	Yes, this will be specified clearly in the specific CPA-DD	OK	OK
A.6. Does the generic CPA-DD provided the name and contact details of the entity responsible for the operation of the CPA?	gCPA DD	DR	This is not provided in the Part II of PoA-DD i.e. Generic CPA-DD but rather being specified in the specific CPA-DD	OK	OK

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
A.7. Has the Generic CPA-DD using the provisions provided under proposed PoA-DD?	gCPA DD	DR	Yes the g-CPA DD has used provision provided under proposed PoA DD	OK	OK
A.8. Does the gCPA provides information in order to define the start date and with reference of appropriate evidence? Note: Definition of SD of CPA has been provided in "Glossary of CDM terms".	gCPA DD	DR	Yes, the start date of the CPA will be specified in the Specific CPA DD, has been indicated as not before the date of commencement of PoA validation	OK	OK
A.9. Does the generic CDM-CPA-DD provides a confirmation that the start date of any CPA is not/or will not be, prior to the PoA validation? (i.e. the date on which the CDM POA- DD is first published for GSC) (Ref: § 193 of EB 70 Annex 3)	gCPA DD	DR	See A.8	OK	OK
A.10. Does the gCPA provide information that ensures the operational lifetime of the CPA and reference of the evidence?	gCPA DD	DR	Yes, this will be specified in the Specific CPA DD which will indicate that the evidence of project lifetime are to be indicated as reference footnote for each CPA	OK	OK
A.11. Does the generic CDM-CPA-DD provides information on the SD of the crediting period of the proposed CPA? (Ref: § 197 of EB 70 Annex 3)	gCPA DD	DR	Yes, it is stated in the specific CPA-DD that the years of crediting period of each CPA is limited to the end date of the registered PoA	OK	OK
A.12. Does the generic CDM-CPA-DD include information on the options to choose the type of CP (either fixed or renewable) and duration of the chosen crediting period of the CPA? Note: The duration of the CP of the CPA shall not exceed the end date of the PoA (i.e. 28 years).	gCPA DD	DR	Yes, options for fixed / renewable crediting period has been included in the Specific CPA DD	OK	OK
A.13. Does the generic CPA-DD provides information to	gCPA	DR	Yes, the confirmation has been provided in the	OK	OK

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
confirm that the proposed small-scale CPA is not a de-bundled component?	DD		Specific CPA DD		
A.14. Does the generic CPA-DD provides information for the confirmation of the requirement that the CPA is neither registered as a CDM project activity nor included in another registered PoA?	gCPA DD	DR	Yes section A.13 of the Specific CPA DD provides information for the confirmation of the requirement that the CPA is neither registered as a CDM project activity nor included in another registered PoA.	OK	OK
A.15. Have CPA DD provides information on the provisions which ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA?	gCPA DD	DR	Yes section D.5 of the Specific CPA DD provides information on the provisions which ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA	OK	OK
A.16. Is all necessary information is mutually consistent between POA-DD and the Generic CPA-DD? In case of any corrective action on the PoA DD, ensure the synchronisation of the PoA DD and g-CPA DD at the closure of corrective action.	gCPA DD	DR	Yes, actually the VVS track PoA-DD contained Part II of the Generic CPA-DD which is not entirely the same as the Specific CPA-DD. However, the key requirements of PoA-DD & Generic CPA-DD contained as Part II of PoA-DD is in line with the Specific PoA-DD	OK	OK
B.1. Eligibility of CPA and Additionality **Assessment of CPA with the eligibility criteria for inclusion in the programme of activity.** **Ref: para6(g)of EB55 Annex 38**					
B.1.1. Does the information (how each CPA will fulfil the eligibility criteria) as specified in the PoA DD provided in the generic CPA-DD? (Ref: § 196 of EB 70 Annex 3)	gCPA DD	DR	Yes information on the eligibility criteria has been provided in section D.5 of the g CPA DD.	OK	OK
B.1.2. Does the gCPA includes information on the applicability of the applied baseline and monitoring methodology as described in the most updated PoA-DD?	gCPA DD	DR	Yes, this has been defined clearly in g CPA DD, each applicability methodology requirements	OK	OK

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
(Ref: § 16(e) of EB 70 Annex 5)					
B.1.3. Does the gCPA include information on the financial analysis of the CPA to demonstrate that without CDM revenue the CPA is not a financially attractive option? Note: This is PoA specific, if CME has opted the demonstration of financial analysis in the PoA DD, then it is required in the generic CPA DD otherwise not required.	gCPA DD	DR	CME has opted for financial analysis (investment barrier) to demonstrate additionality in PoA DD and g CPA DD.	OK	OK
B.1.4. Does the gCPA information on the barrier analysis to demonstrate that the project activity faces significant/prohibitive barriers that are overcome through the CDM?	gCPA DD	DR	Not applicable – investment barrie ris demonstrated via investment analysis approach	OK	OK
B.2.1. Does the generic CPA-DD provides information on the calculations of baseline emissions and estimated emission reductions according to information delineated in the POA-DD?	gCPA DD	DR	Yes, the g-CPA DD provides information on the calculations of baseline emissions and estimated emission reductions according to information delineated in the POA-DD	OK	OK
B.2.2. Does the CPA-DD ensure that the information and approach of leakage calculation, additionality demonstration, baseline scenario selection and baseline are explicitly defined?	gCPA DD	DR	Yes the information on the information and approach of leakage calculation, and baseline are defined in the g-CPA DD.	OK	OK
B.2.3. Is the g CPA DD provides calculation (approach only) of baseline emissions, project emissions and leakage emissions of the typical CPAs (to be included in the PoA) established in accordance with the procedure described in the PoA-DD?	gCPA DD	DR	Yes, calculation approach has been included according to the PoA-DD	OK	OK
B.2.4. Are information on emission reduction calculation includes required information on any (if required) conservative assumptions used and uncertainties to be addressed when calculating the baseline emissions, project emissions and leakage emissions?	gCPA DD	DR	Yes, this has been specified clearly the g-CPA DD	OK	OK

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
B.2.5. Does the gCPA information on the demonstration that emission reductions of the CPA will be real, measurable and give long term benefits related to the mitigation of climate change?	gCPA DD	DR	Yes, this has been specified clearly the g-CPA DD	OK	OK
B.3.1. Is the information (in a complete and transparent manner) on the monitoring plan (to be employed by a typical CPA of the PoA) provided in the gCPA DD and does it comply with the applied methodology, in accordance with the information provided in the PoA DD? (Ref: § 198 of EB 70 Annex 3)	gCPA DD	DR	Yes, it is complete & transparent & comply with the methodology	OK	OK
B.3.2. Does the gCPA-DD provides confirmation that all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme, whichever occurs later?	gCPA DD	DR	Yes, this confirmation has been provided in g-CPA DD Section B.7.1	OK	OK
B.3.3. Are the measurement methods clearly stated for each monitored parameters to be monitored for ER calculations and deemed appropriate?	gCPA DD	DR	Yes, this has been specified according to the methodology requirements for monitoring	OK	OK
B.3.4. Are the information on the measurement equipment and calibration procedures described and deemed appropriate?	gCPA DD	DR	Yes, this has been specified clearly for each parameters in the g-CPA DD	OK	OK
B.3.5. Is the information on the authority and responsibility of overall CPA management clearly described in the g CPA DD?	gCPA DD	DR	Yes, responsibility & authority for overall CPA management has been described in g-CPA DD Section B.7.1	OK	OK
B.3.6. Are procedures identified for training of monitoring personnel?	gCPA DD	DR	Yes, procedures have been identified for training of monitoring personnel.	OK	OK

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
B.3.7. Are information on procedures to identify emergency preparedness for cases where emergencies can cause unintended emissions described in the gCPA DD?	gCPA DD	DR	Yes, this has been defined clearly in the g-CPA DD Section B.7.1	OK	OK
B.3.8. Are information on procedures for review of reported results/data summarised in the g CPA DD?	gCPA DD	DR	Yes, this has been defined clearly in the g-CPA DD Section B.7.1	OK	OK
C. Environmental Impacts					
C.1. Does the generic CPA-DD provides information on the environmental analysis as per requirements of the CDM modalities and procedures and PoA specific guidelines? (Ref: § 199 & 200 of EB 70 Annex 3)	gCPA DD	DR	Yes, this is specified at Specific CPA-DD, provides information on the environmental analysis as per requirements of the CDM modalities and procedures and PoA specific guideline i.e. as identified in the PoA DD that environmental analysis will be conducted on CPA level.	OK	OK
D. Stakeholders' Comments					
D.1. Does the generic CPA-DD provides information on how comments by local stakeholders shall be invited, a summary of the comments shall be received and how due account shall be taken of any comments to be received, as applicable? And whether stakeholders consultation process has/will be/ done on PoA level or each CPA level (as described in the PoA DD)? (Ref: § 201 & 202 of EB 70 Annex 3)	gCPA DD	DR	Yes, this is specified at Specific CPA-DD, provides information on how comments by local stakeholders shall be invited, a summary of the comments shall be received and how due account shall be taken of any comments to be received, as applicable, furthermore it is also confirmed in the g-CPA DD that LSC will be conducted on CPA level.	OK	OK

Table 2: CDM-SSC-gCPA-DD Requirements Checklist ((based on § 37 of the CDM Modalities and Procedures and on VVS ver 3.0, Annex 3 of EB 70

CL / CAR No	Observations	Reference to PoA DD	Summary of project owner response	Revised section (s) of the PoA DD	Validation team conclusion
PART I : Programme of Activities (PoA)					
CAR-01	PoA-DD Section A.2 1.1) The PoA descriptions are not clear whether the project activity would be implemented only in palm oil industry? During desk review discussion, the validation team was informed that the project activity would be applied also in other industry such as starch, ethanol etc.	A.2	Response No. 1 In section A.2 of the PoA-DD it has now been clarified that the CPA under the PoA are implemented at agro-industrial facilities which generate biogenic organic wastewater (as required by the methodology AMS.III.H). At time of inclusion, eligibility criteria of this PoA require compliance of a CPA with the methodology requirements of AMS.III.H. Therefore, any agro-industrial facility that meets the criteria of the methodology and also implements a measure that is defined in the PoA-DD, will be eligible for inclusion in the PoA.	A.2	Response No. 1 OK, this is now much more specific & clarified clearly in the PoA-DD. Only agro-industrial facilities which generates biogenic organic wastewater according to AMS-III.H requirements have been considered The validation team considered this to be adequate & in line with the methodology requirements CAR 1.1 is resolved & closed
	1.2) Environmental sustainability The following statements are inaccurate / vague: “Higher performance wastewater treatment systems enable better compliance with the final discharge limit that reduces the risk of water contamination”	A.2	Response No. 1 The statement has been revised to “increased performance”.	A.2	Response No. 1 OK, this is now clarified & accepted by the validation team CAR 1.2 is resolved & closed

	1.3) Environmental sustainability *"The CPAs may use the recovered biogas for energy generation. Thus it **will reduce the fossil fuel use** and the associated GHG emissions"* Please clarify how it will reduce fossil fuel use since most of the palm oil mills depends mainly on biomass boiler using fibres & mesocarp shells for fuel instead of using fossil fuels (typically used as only for backup diesel genset)	A.2	Response No. 1 The statement has been revised as follows "The CPAs may use the recovered biogas for electricity generation, in those cases the CPA will reduce the fossil fuel use and the associated GHG emissions of fossil fuel fired power plants in the grid."	A.2	Response No. 1 OK, this is clarified & clear that only those CPA with associated fossil fuel fired power plants will be able to reduce fossil fuel use in case the CPA use the recovered biogas for electricity generation CAR 1.3 is resolved & closed
CAR-02	PoA DD Section A.3 2.1) LoA of the host country, Indonesia & Annex 1 - Netherlands which is a pre-requisite for the RFR submission are not yet available during the on-site validation	A.3	Response No. 1 Both LoA's are in the application process and will be submitted once available. Response No. 2 LoA issued by Annex 1 party has now been provided to the DOE. LoA of host country Indonesia is currently in application process and will be submitted once available.	A.3	Response No. 1 OPEN, until the LoAs are received by the validation team Response No. 2 OK, LoA from Annex 1 country i.e. Netherlands has been received, dated 25-09-2012 Host country LoA is also received, dated 29 October 2012 CAR-02 is resolved & closed
	2.2) MoC is also not yet available at the time of on-site validation for cross checking with the information contains in the PoA DD Appendix 1	A.3	Response No. 1 MoC is being drafted and will be submitted as soon as possible. Response No. 2 MoC has been submitted to DOE.	A.3	Response No. 1 OPEN, until the MoC is received by the validation team Response No. 2 The MoC has been received & checked for the consistency with the updated PoA-DD Annex 1 & found to be consistent CAR-02.2 is resolved & closed

CAR-03	PoA DD Section A.6 The descriptions of the technologies and/or measures to be employed and/or implemented by the CPAs in the PoA are not fully in line with the selected technology measures from the methodology AMS-III.H version 16, paragraph 1 & AMS-I.D version 17, paragraph 1, defined in PoA DD Section B.3	A.6	Response No. 1 Section A.6 of the PoA have now been made consistent with the methodology AMS-III.H version 16, paragraph 1 & AMS-I.D version 17, paragraph 1	A.6	Response No. 1 According to the revised PoA-DD, the selected technology / measures according to AMS-III.H Version 16 is in accordance with paragraph 1 (a), 1(d) & 1 (f) As for AMS-I.D Version 17, the selected Technology / measure is in accordance with paragraph 1 (a) & 1 (b) This is now clarified & defined clearly in the revised PoA-DD & are accepted by the validation team CAR-03 is resolved & closed
CAR-04	PoA DD Section B.2 4.1) Eligibility criteria D: *"The SSC-CPA shall confirm to one of technological scenarios as described in section A.1 of the SSC-PoA-DD"* Section A.1 is incorrect Besides, it is not clear whether the technological scenarios would be applied to only palm oil industry? During the desk review, the PP also mentioned that it would be also applied to other industry such as starch, ethanol etc.	B.2	Response No. 1 The reference has been corrected to section A.6 in the PoA-DD.	B.2	Response No. 1 OK, this has been corrected to section A.6 & this refers to CPA under the PoA are only eligible for inclusion if their purpose is to treat biogenic organic wastewater and if their industry is listed in The State Ministry of Environment Decree no Kep-51/MENLH/10/1995 on the Wastewater Standard for Industrial Activities CAR-04 is resolved & closed
	4.2) Eligibility criteria G mentioned that the demonstration of additionality will be in accordance with paragraph 6 & 8 of	B.2	Response No. 1 Eligibility criteria G have been revised to refer to "paragraph 7	B.2	Response No. 1 OK, this has been corrected & consistent with paragraph 7 & 9 of

	Annex 2, EB 63. But this is inconsistent with the earlier paragraph statements in PoA DD page 6, which states that the applicable eligibility criteria will follow Annex 3 of EB 65		and 9 of annex 03, EB 65."		the Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 01.0, EB 65, Annex 3 Remarks: This has been updated again & now in line with Standard For Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies For Programme of Activities, Version 02.0, EB 70, Annex 5, paragraph 7 & 9 CAR 4.2 is resolved & closed
	4.3) Eligibility criteria H & M are repetitive	B.2	Response No. 1 Eligibility criteria H have been revised to remove the duplicate requirement for a stakeholder consultation meeting. Response No. 2 Eligibility criteria H in section B.2, Table I.B.2.1 have been revised to remove the duplicate requirement for a stakeholder consultation meeting.	B.2	Response No. 1 Still not yet revised Response No.2 OK, the repetitive criteria has been revised & updated in the revised PoA-DD CAR 4.3 is resolved & closed
	4.4) Please clarify earlier what is Scenario E, Scenario 1 or 2?	B.2	Response No. 1 The scenario description is now explained in section A.6 of the PoA-DD.	B.2	Response No. 1 OK, this is now clarified in Section A.6 of the PoA-DD

					CAR 4.4 is resolved & closed
CAR-05	PoA DD Section B.3 5.1) Combinations of all technologies / measures and methodologies that will be used are not yet defined clearly in the PoA DD	B.3	Response No. 1 Section B.3 has been revised to explain the plausible combinations of all technologies / measures and methodologies. Response No. 2 Table I.B.3 in section B.3 has been revised to be consistent with the combination of measures possible under the combination of methodologies that are applied in this PoA.	B.3	Response No. 1 According to the PoA-DD, the Combinations of measures and methodology are possible under the PoA, defined in Table I.B.3 – measure and methodology combinations However, the measures defined for each combination methodology are incorrect Response No. 2 Table I.B.3 revised has been checked again by the validation team & confirmed to be correct, aligned with the combination methodology applied versus measures CAR-5.1 is resolved & closed
	5.2) Applicable methodology tools are not yet determined & indicated in the PoA-DD Section B.3	B.3	Response No. 1 Applicable methodology tools are now determined & indicated in the PoA-DD Section B.3	B.3	Response No. 1 OK, this is now stated clearly in the PoA-DD Section B.3 CAR-5.2 is resolved & closed
CAR-06	PoA DD Section C EB 55 Annex 38 Paragraph 6(i) used to confirm for double counting avoidance is not applicable for VVS track	Section C	Response No. 1 Reference to EB 55 Annex 38 Paragraph 6(i) has been removed.	Section C	Response No. 1 OK, this has been revised in the PoA-DD CAR-06 is resolved & closed

CAR-07	PoA DD Section E.2 7.1) What about applicability of environmental impacts analysis for Type I project? Only Type III was considered in this section	E.2	Response No. 1 The regulation that affects the CPA that also generates electricity has now been indicated in section E.2 of the PoA.	E.2	Response No. 1 Accordingly, the justifications for Type 1 project - CPA implementers are not required to prepare an EIA report, but shall prepare UKL/UPL instead in order to comply with the requirement set by the MENLH No.11/2006. An approved UKL/UPL comprises of description of minor impacts the environment and consists of identification the corrective This is accepted by the validation team based on local knowledge of the legal requirements in Indonesia CAR 7.1 is resolved & closed
	7.2) Please clarify the following statements: *"Each of the activities is linked with **a scale**. All the activities that are beyond of the **scale** will require an EIA"* Please clarify what is meant by "scale"?	E.2	Response No. 1 The referenced sentence has been removed for clarity.	E.2	Response No. 1 OK, the vague statement has been removed & accepted by the validation team CAR 7.2 is resolved & closed
CAR-08	PoA DD Section G At the time of on-site validation, the followings have not been obtained: a) Party(ies) involved in the proposed PoA b) CME letters of authorization of its coordination of the PoA from each	Section G	Response No. 1 The relevant documentation will be submitted as soon as it has been received from the respective DNA's.	Section G	Response No. 1 CAR will be closed once the documentations are received & accepted by the validation team Response No. 2 Authorizations has been received by the CME via letter of approvals

	Party.				from host country Indonesia & Annex 1 country, Netherlands

CAR-09	PoA DD Section A.7 Objective evidence / reference source to substantiate that there is no public funding at the level of the PoA is not yet provided or stated in the PoA-DD	A.7	Response No. 1 The declaration letter from CME to substantiate that no public funding is used at PoA level has now been submitted to DOE. (Doc Nr. 63 (CME Declaration of no diversion of ODA)) Response No. 2: The document has been resubmitted to the DOE. Please refer to Doc Nr. 63 (CME Declaration of no diversion of ODA)	A.7	Response No. 1 Not yet submitted Response No. 2 Declaration letter dated 21 May 2012, by the CME i.e. PT Blue World Indonesia has been reviewed & it has been stated clearly that there is no public funding / ODA at PoA level CAR-09 is resolved & closed
CAR-10	Appendix 1 Mandatory fields for the contact information are not completed yet Telephone, Fax, Email	Appendix 1	Response No. 1 Mandatory fields have now been completed in appendix 1 of the PoA-DD. Note that the "Blue World Carbon SEA Pte Ltd" does not have a fax. Response No. 2 Fax number for Blue World Carbon SEA Pte. Ltd. Is now indicated.	Appendix 1	Response No. 1 PoA-DD Page 111 – fax number is not yet stated (for Blue World Carbon SEA Pte. Ltd.) Response No. 2 Fax number now are completed in the Appendix 1 & accepted by the validation team CAR-10 is resolved & closed
CL-01	PoA-DD Section A.2 Please clarify the following statements: *"Each small-scale CDM Program Activity*	A.2	Response No. 1 The sentence has been revised for clarity.	A.2	Response No. 1 OK, the sentences has been revised slightly for clarity &

	(referred to later on as "CPA") under this PoA will ***comprise one or more such methane (biogas) recovery system(s)*** *(referred to later on as "biogas plant") and result in aggregate emissions reductions of less….."*				accepted by the validation team CL-01 is resolved & closed
CL-02	PoA-DD Section A.6, Page 5 Please clarify the following statement: *"e) Infrastructure to* ***distribute the treated wastewater from the biogas system to open lagoons or aerobic treatment*** *(this may include land application)"* Why distribute treated wastewater from the biogas system…..?	A.6	Response No. 1 The statement has been revised to state that "A system for piping wastewater from the biogas system to… "	A.6	Response No. 1 OK, the revised statements are accepted by the validation team CL-02 is resolved & closed
CL-03	The term CPA, SSC-CPA, CPA implementer, CPA operators etc. are used interchangeably & inconsistent throughout the PoA DD	-	Response No. 1 References to CPA to SSC-CPA have been made consistent to "CPA". CPA implementer and CPA operators are now referred to as CPA implementer only. Response No. 2 Remaining instances of "SSC" have been removed from the PoA-DD, with exception of the section that discusses debundling of small scale CPA. Response No. 3 Remaining instances of "CPA operator" have been revised to "CPA implementer" in the revised PoA-DD.	-	Response No. 1 Kindly re-check the PoA-DD e.g., page 12, 14 Response No. 2 "CPA Operator" in page 12 ? Response No. 3 OK, this has been corrected CL-03 is resolved & closed

Table 4: Resolution of Corrective Action and Clarification Requests raised on g-CPA DD					
CL/CAR No	**Observations**	**Reference of table 2 specific to g-CPA DD**	**Summary of project owner response**	**Revised section(s) of the g CPA DD**	**Validation team conclusion**
PART II : Generic component project activity (CPA)					
CAR-g01	Generic CPA Section A.1 Table II.A.2.1 For project scenario 2: Biogas plants installed at existing facilities It is not clearly defined according to the methodology AMS-III.H version 16, paragraph 27 & 28 (existing facility with / without 3 years' operating history)	A.1	Response No. 1 Section A.1 and the technology scenario description provided in this section is of descriptive nature only and as such only defines existing or green field facilities. Relevant methodology requirements in relation with the available historic data are considered for each CPA. The same is now indicated in section B.6.1 of the PoA-DD. Response No.2 Response No. 1 has been corrected. Kindly refer to response 1.	A.1	Response No. 1 "The same is now indicated in **section XX and XX** of part II of the PoA-DD and the real case CPA-DD" ?? Response No. 2 OK, this is corrected & reflected in the revised PoA-DD; Generic CPA Section A.1. Specific demonstration for paragraph 27 & 28 will be done at CPA level, however the provisions for considering these paragraphs 27 & 28 have been included in Generic CPA Section B.6.1 CAR-g01 is resolved & closed

CAR-g02	Generic CPA Section B.2 Table II.B.2.1 2.1) During the desk review discussion, it has been confirmed with the CME that the applicable measures selected according to AMS-III.H version 16, paragraph 1 are 1a, 1d, 1f. However, the Generic CPA mentioned applicable options as 1a, 1b, 1e and 1f. This is also inconsistent with the technology / measures defined in PoA DD Section A.6. See CAR-03	B.2	Response No. 1 The measure to be introduced in each CPA includes option 1(a), 1(d) or 1(f), as identified in paragraph 1 of AMS-III.H version 16. The same has been revised in the PoA-DD.	B.2	Response No. 1 OK, the Generic CPA Table II.B.2.1: Applicability conditions of methodology AMS.III.H Version 16 – paragraph 1: clearly stated now that only option 1a, 1d & 1f are applicable for each proposed CPA under the PoA CAR-g2.1 is resolved & closed
	Table II.B.2.1 2.2) The justifications provided in the Generic CPA for the following paragraphs are not yet substantiated / incorrect. Documentation that has been used as a basis for justification including references are not yet included Paragraph 2 Paragraph 3 Paragraph 4 Paragraph 12 Paragraph 14 Paragraph 38	B.2	Response No. 1 Rectifications have been made to further clarify how the requirements of the methodology are met. Note however that there is no documentation to substantiate the same at PoA level. The description provided at PoA level is of generic nature and at time of CPA inclusion, each CPA will demonstrate (with supporting documents) that it meets the applicability criteria of the methodology. CPA must comply with the applicability criteria of the methodology as per eligibility criteria of the PoA.	B.2	Response No. 1 Reviewed the revised Generic CPA-DD in Part II of the PoA-DD & found the expected documentations to be used as a basis for justifications including references have been included to explain how each applicability criteria can be fulfilled It is understood as well that the specific reference documentations will be mentioned specifically at specific CPA-DD level However, the Guidelines For Completing The Programme Design Document Form For Small Scale CDM Programme of Activities, Version 02.0, EB 67, Annex 30, page 8 stated that *"Explain documentation that has been used as a basis of*

			Response No. 2 In Table II.B.2.1 documentation required to confirm compliance of the eligibility of methodology is now indicated.		*justification and provide references or include the documentation in Appendix 3: below."* Paragraph 14 & 38 – not yet included such expected documentations yet Response No. 2 OK, Table II.B.2.1 has been updated & included the documentations required specifically for each applicability conditions CAR-g2.2 is resolved & closed
	Table II.B.2.2 2.3) The justifications provided in the Generic CPA for the following paragraphs are not yet substantiated / incorrect Documentation that has been used as a basis for justification including references are not yet included Paragraph 5 Paragraph 7	B.2	Response No. 1 Rectifications have been made to further clarify how the requirements of the methodology are met. Note however that there is no documentation to substantiate the same at PoA level. The description provided at PoA level is of generic nature and at time of CPA inclusion, each CPA will demonstrate (with supporting documents) that it meets the applicability criteria of the methodology. CPA must comply with the	B.2	Response No. 1 However, the Guidelines For Completing The Programme Design Document Form For Small Scale CDM Programme of Activities, Version 02.0, EB 67, Annex 30, page 8 stated that *"Explain documentation that has been used as a basis of justification and provide references or include the documentation in Appendix 3: below."* Paragraph 5 & 7 – not yet included such expected documentations yet

			applicability criteria of the methodology as per eligibility criteria of the PoA. Response No. 2 In Table II.B.2.2 documentation required to confirm compliance of the eligibility of methodology is now indicated.		Response No. 2 OK, Table II.B.2.1 has been updated & included the documentations required specifically for each applicability conditions CAR-g2.3 is resolved & closed
	Table II.B.2.2 2.4) Demonstration that the CPA qualifies as Type I, II, and/or III during every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard is missing	B.2	Response No. 1 In section B.2, Part II of PoA-DD demonstration that the CPA qualifies as Type I, II, and/or III during every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard. Please refer to the table "Table II.B.2.3: Justification that CPA qualifies as Type I, II, and/or III"	B.2	Response No. 1 Reviewed Table II.B.2.3 & demonstration that the CPA qualifies as Type I & III (applicable to this PoA) during every year of the crediting period has been included now This is accepted by the validation team CAR-g2.4 is resolved & closed
	2.5) Applicability conditions stated in the generic CPA is not traceable to the paragraph numbers in the methodologies	B.2	Response No. 1 Applicability conditions stated in the generic CPA are now traceable to the paragraph numbers in the methodologies.	B.2	Response No. 1 OK, this is now consistent with the methodology CAR-g2.5 is resolved & closed
CAR-g03	Generic CPA Section B.3 3.1) Table II.B.3.1 Depending on the outcome of the revision for Section B.2 – applicable	B.3	Response No. 1 The emission sources & gases included in the SSC CPA boundary are now consistent with	B.3	Response No. 1 3.1.1) Why "Figure II.B.3.1 Flow diagram of the CPA boundary for technological scenario 1 and 2" is

	conditions selected according to paragraph 1 of AMS-III.H version 16, the emission sources & gases included in the SSC CPA boundary are not fully consistent		the defined technology scenarios & measures implemented under the PoA. Response No. 2 The Figure II.B.3.1 has been corrected and is now correctly displayed in the document. Response No. 3 The Figure II.B.3.1 has been revised to address the finding of CAR-g3.4.		blank? Response No. 2 Revised Figure II.B.3.1 has been reviewed. See CAR-g3.4 below Response No. 3 Revised Figure II.B.3.1 has been reviewed. See CAR-g3.4 below Will be reviewed again & finalized upon closure of CAR-g3.4 Response No. 4 OK, emission sources applicable have been updated & consistent with the emission sources listed in the Table II.B.3.1 & Table II.B.3.2 CAR-03.1 is resolved & closed

	3.2) Figure II.B.3.1 & Figure II.B.3.2 Flow diagram as shown in the Generic CPA are not yet fully shown the physically delineating each generic CPAs, **based on the descriptions provided in section A.6 "Technologies/measures"** of Part I above, as prescribed in the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0	B.3	Response No. 1 Flow diagram Figure II.B.3.1 & Figure II.B.3.2 are generic in nature but each CPA-DD is required to delineate the project boundary in a flow diagram in accordance with the completing guideline of the CPA-DD.	B.3	Response No. 1 OK, the revised diagram are accepted by the validation team CAR-g3.2 is resolved & closed
	3.3) Figure II.B.3.1 & Figure II.B.3.2 Flow diagram has not yet includes all of the equipment, systems and flows of mass and energy described in that section A.6, as prescribed in the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0	B.3	Response No. 1 Flow diagram Figure II.B.3.1 & Figure II.B.3.2 is generic in nature but each CPA-DD is required to delineate the project boundary in a flow diagram in accordance with the completing guideline of the CPA-DD. Response No. 2: The mill/factory is not indicated in the diagram because it would typically not be affected by the project activity. Sludge disposal is now also indicated in the figure. Downstream facilities may vary per CPA and hence will be indicated at CPA level.	B.3	Response No. 1 OK, the equipment such as digester / generators / flaring system / transformer have been defined clearly including the flows in the flow diagram What about the other items such as mill / factory? End sludge application? Any downstream facilities identified in the project boundary? Response No. 2 OK, this is accepted by the validation team since this is in line with the project boundary descriptions in AMS-I.D & AMS-III.H methodology requirements CAR-g3.3 is resolved & closed

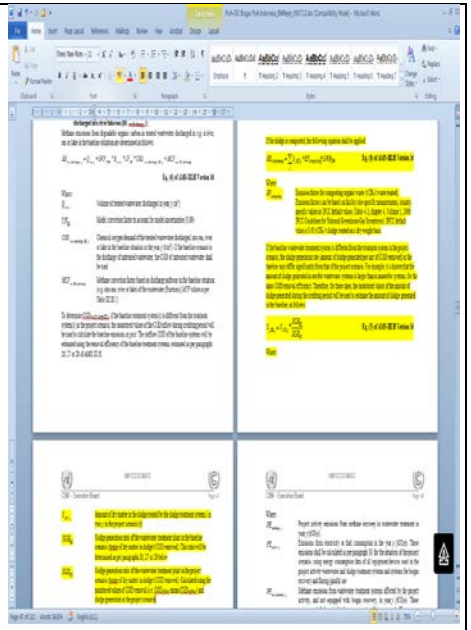
	3.4) Figure II.B.3.1 & Figure II.B.3.2 The diagram has not indicated the emissions sources and GHGs included in the project boundary and the data and parameters to be monitored, as prescribed in the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0	B.3	Response No. 1 Flow diagram Figure II.B.3.1 & Figure II.B.3.2 is generic in nature but each CPA-DD is required to delineate the project boundary in a flow diagram in accordance with the completing guideline of the CPA-DD. Response No. 2 The GHGs + data & parameters to be monitored are now indicated, but of indicative nature. The complete monitoring plan in accordance with the methodology will be described in the diagram of each CPA.	B.3	Response No. 1 3.1.2) However, the Guidelines For Completing The Programme Design Document Form For Small Scale CDM Programme of Activities, Version 02.0, EB 67, Annex 30, page 8 stated that "……*Include in the flow diagram all the equipment, systems and flows of mass and energy described in that section. In particular,* ***indicate in the diagram the emissions sources and GHGs*** *included in the project boundary and the* ***data and parameters to be monitored***" Figure II.B.3.2 Flow diagram of the project boundary for technological scenario 1 and two in combination with scenario E - not yet included the emission sources & GHGs + data & parameters to be monitored Response No. 2 However, although the GHGs + data & parameters to be monitored are indicated as of indicative nature, but this is not in line with the guideline requirement & not traceable to the specific parameters to be monitored at specific CPA level. "Indicative nature" can be accepted as long some means of

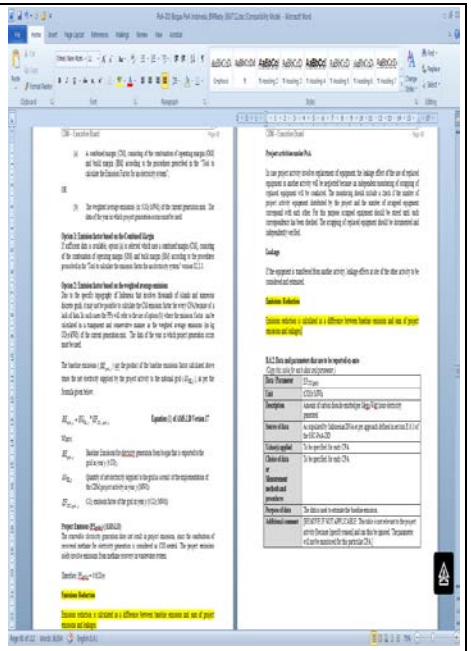
			Response No. 3 The diagram has been revised to show the GHGs + data & parameters to be monitored for a typical CPA under the PoA. Please refer to Figure II.B.3.1 & Figure II.B.3.2. Response No. 4 Figure II.B.3.1 and Figure II.B.3.2 have been revised to indicate parameter COD ww, discharge, y. $COD_{ww, discharge, y}$ $FC_{DIESEL,j,y}$; $FC_{FO,j,y}$; $FC_{COAL,j,y}$ $NCV_{DIESEL,y}$; $NCV_{FO,y}$; $NCV_{COAL,y}$ $EF_{CO2,DIESEL,y}$; $EF_{CO2,FO,y}$; $EF_{CO2,COAL,y}$ Furthermore, Parameter $n_{flare, h}$ is now indicated in Generic CPA-DD Section B.7.1 and Figure II.B.3.1 and Figure II.B.3.2. Duplicate parameter FE (flare efficiency) has been removed from the figures.		traceability to specific monitoring parameters are made available at Generic CPA – DD For "***the emissions sources and GHGs***", GHGs have been indicated in the diagram but not linked to its sources? Response No. 3 The revised diagram is accepted by the validation team The diagram will be checked again once all CAR / CL related to monitoring parameters are closed Response No. 4 Figure II.B.3.1 Parameter $COD_{ww, discharge, y}$ is missing Figure II.B.3.2 Parameters as follows are missing – please re-confirm $COD_{ww, discharge, y}$ $FC_{DIESEL,j,y}$; $FC_{FO,j,y}$; $FC_{COAL,j,y}$ $NCV_{DIESEL,y}$; $NCV_{FO,y}$; $NCV_{COAL,y}$ $EF_{CO2,DIESEL,y}$; $EF_{CO2,FO,y}$; $EF_{CO2,COAL,y}$ Parameter $n_{flare, h}$ is included in Figure II.B.3.2 but missing in Generic CPA-DD Section B.7.1? Response No. 5 *3.4) OK this has been corrected*

					CAR-g3.4 is resolved & closed

	3.5) Descriptions of project boundary for AMS-I.D is inconsistent with the methodology paragraph 9	B.3	Response No. 1 Description of project boundary has been revised, i.e. now includes all power plants connected physically to the electricity system.	B.3	Response No. 1 OK, this has been revised & updated in the Generic CPA-DD Section B.3 CAR-g3.5 is resolved & closed
	3.6) Table II.B.3.1 Project emissions from biomass stored under anaerobic conditions have not been included	B.3	Response No. 1 Project emissions from biomass stored under anaerobic conditions have now been included in Table II.B.3.1.	B.3	Response No. 1 OK, this is now included in the Table II.B.3.1 CAR-g3.6 is resolved & closed
CAR-g04	Generic CPA Section B.4 *"The baseline determined using the General Guidelines to SSC CDM Methodologies will be one of the following:* • *Aerobic wastewater treatment system without biogas recovery* • *Anaerobic wastewater treatment system (such as lagoon, septic tank or an on-site industrial plant) without biogas recovery* • *Untreated wastewater stream"* It is not clear whether each of the baseline scenarios applies for palm oil, starch, ethanol etc. industry?	B.4	Response No. 1 The baseline must meet the applicability of the methodology and is therefore not limited to a certain type of facility (e.g. palm oil or ethanol), but rather the existing baseline wastewater system in place at the site in conjunction with the applicability of the methodology (biogenic organic wastewater). Since untreated wastewater is not allowed for discharge this alternative has been removed from the PoA-DD.	B.4	Response No. 1 OK, since it is clearly stated earlier that the project will treat biogenic organic wastewater and if their industry is listed in The State Ministry of Environment Decree no Kep-51/MENLH/10/1995 on the Wastewater Standard for Industrial Activities, hence this issue has been clarified And the baseline determined is deemed to be valid based on the validation team's local industry experience. The untreated wastewater treatment system is rightfully removed since this alternative is not in compliance with the local regulations of Indonesia CAR-g04 is resolved & closed

CAR-g05	Generic CPA Section B.5 5.1) See CAR-04 & make the same revisions for Table II.B.5.1, eligibility criteria D (Section A.4.2?), G (Paragraph 6 & a of Annex 2, EB 63?)	B.5	Response No. 1 Generic CPA Section B.5 has been made consistent with the revisions made in relation to CAR-04 Response No. 2 The inconsistencies in section b.5 of the PoA-DD have been rectified.	B.5	Response No. 1 Still inconsistent – please recheck (Section A.4.2?), Annex 2 or Annex 3?) Response No. 2 OK, this is now consistent & corrected according to corrections done for CAR-04 CAR-g05 is resolved & closed
	5.2) Eligibility criteria I – Information requirement described does not explain clearly how does the CPA implementer considered the threshold requirement can be complied. No proper justifications are provided for each type of industry applicable (POME, starch, ethanol etc.)	B.5	Response No. 1 To determine if a CPA of the PoA is within the threshold (i.e. emission reduction of less than or equal to 60 kilotons of CO2 equivalent annually) the CME must refer to a detailed calculation in spread sheet for the particular proposed CPA, because it is CPA dependant. There are no rules of thumb that can be described in order to determine if a CPA is below threshold. COD, wastewater flow, production days, project design, and more parameters influence the final calculation.	B.5	Response No. 1 OK, reference to ER calculation spread sheet is accepted by the validation team CAR-g5.2 is resolved & closed
CAR-g06	Generic CPA Section B.6.1 6.1) Equations will be used in calculating emission reductions are not yet specified according the Guidelines for Completing the Programme Design Document Form	B.6.1	Response No. 1 Equations that will be used in calculating emission reductions are now indicated.	B.6.1	Response No. 1 6.1.1) Redundant equation in the generic CPA-DD

	for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement		Response No. 2: The redundant equation has been removed in the revised PoA-DD. Furthermore, the ER equation from AMS-I.D is now stated in the Generic CPA-DD.		

					 ER equation for AMS-I.D is not yet stated in the Generic CPA-DD Response No. 2 OK, the additional repeated equations have been deleted ER equation for AMS-I.D is now included already in the Generic CPA-DD CAR-g6.1 is resolved & closed
	6.2) The methods / methodological steps for calculating baseline, project, leakage & emission reductions described in the Generic CPA are not consistent with the respective methodology	B.6.1	Response No. 1 The methods / methodological steps for calculating baseline, project, leakage & emission	B.6.1	Response No. 1 OK, all methods / methodological steps for calculating the baseline, project, leakage & emission

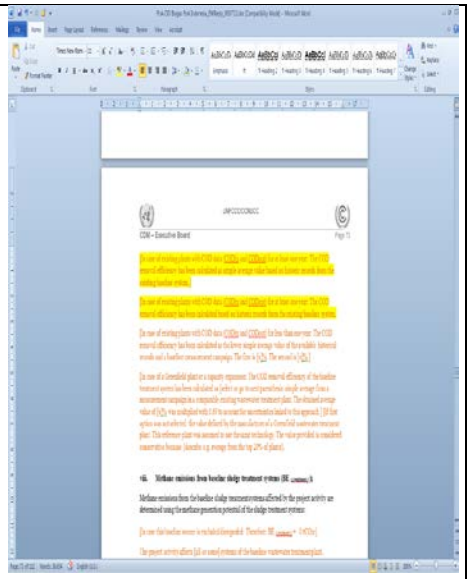
	Besides, some baseline emissions are excluded without any justifications provided in the Generic CPA, e.g. $BE_{s,}$ treatment, y etc.		reductions described in the Generic CPA are now made consistent with the respective methodology. In the description of methodological steps of generic CPA in PoA-DD no emission sources are excluded. This will be assessed and described for each CPA individually.		reductions have been included in the generic CPA-DD & would be evaluated for its relevance & applicability at specific CPA-DD case This is accepted by the validation team CAR-g6.2 is resolved & closed

	6.3) Descriptions of applicable baseline, project, leakage & emission reductions are also not consistent with the intended applicable combination of technology / measures & methodologies	B.6.1	Response No. 1 Descriptions of applicable baseline, project, leakage & emission reductions are now made consistent with the intended applicable combination of technology / measures & methodologies.	B.6.1	Response No. 1 OK, these are now consistently reflected in the Generic CPA-DD CAR-g6.3 is resolved & closed
	6.4) Methodological choices demonstration for both AMS-I.D Version 17 & applicable tool "Tool to calculate the emission factor for an electricity system Version 02.2.1" not stated clearly in the Generic CPA	B.6.1	Response No. 1 Revisions have been made to transparently show the methodological choices demonstration for both AMS-I.D Version 17 & applicable tool "Tool to calculate the emission factor for an electricity system Version 02.2.1" in the generic CPA section of the PoA-DD. Note that there are numerous electricity grids in Indonesia, hence the exact approach according to "Tool to calculate the emission factor for an electricity system Version 02.2.1" cannot be indicated at PoA level, but shall be described clearly in each specific CPA-DD.	B.6.1	Response No. 1 OK, this is now clarified clearly in the revised Generic CPA-DD & accepted by the validation team CAR-g6.4 is resolved & closed
CAR-g07	Generic CPA Section B.6.2 7.1) Depending on the outcome of the revision for Section B.2 – applicable conditions selected according to paragraph 1 of AMS-III.H version 16 (see CAR-g02) & CAR-g06, the data and parameters that are to be reported ex-ante are currently not fully consistent /	B.6.2	Response No. 1 Generic CPA Section B.6.2 has been revised to remove irrelevant parameters and correct remaining ones in accordance with methodology requirements.	B.6.2	Response No. 1 7.1.1) What about $EF_{composting?}$ 7.1.2) Incorrect unit used for $S_{final,BL,y}$ 7.1.3) What about $MCF_{s,\ treatment,\ i}$

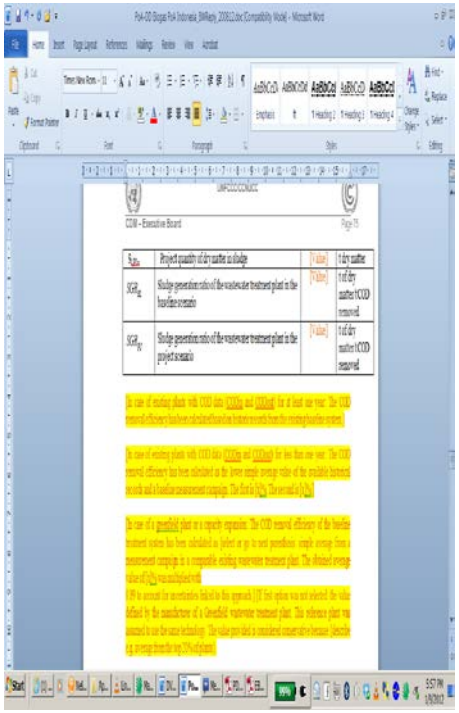
	not applicable		Response No. 2 7.1.1) EFcomposting was removed from section B.6.2 since sludge is not composted. 7.1.2) Unit has been corrected to lower cased "t" to be consistent with the methodology. 7.1.3) The parameter $MCF_{ww,treatment\ PJ,I}$ has been added to section B.6.2 of the PoA-DD.		Response No. 2 7.1.1) OK, this parameter is not applicable 7.1.2) OK, the unit t is consistent with the methodology 7.1.3) OK, this parameter has been added consistent with the methodology CAR-g7.1 is resolved & closed
	7.2) Parameter $EF_{CO2,\ grid,\ y}$ Choice of data or Measurement methods and procedures are not yet specified	B.6.2	Response No. 1 Parameter $EF_{CO2,\ grid,\ y}$ Choice of data or Measurement methods and procedures will be defined for each specific CPA.	B.6.2	Response No. 1 OK, this is now updated & accepted by the validation team CAR-g7.2 is resolved & closed
	7.3) Incorrect purpose of data are specified for the following parameters: a) DOC_F b) F	B.6.2	Response No. 1 The purpose for the specified parameters has been amended with "The data is used to estimate the baseline emission."	B.6.2	Response No. 1 OK, this is now updated & accepted by the validation team CAR-g7.3 is resolved & closed

	7.4) According to the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement *"Measurement methods and procedures": **Where values are based on measurement,** include a description of the measurement methods and procedures applied (e.g. which standards have been used), **indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results*** The above requirements (texts in bold) are not yet specified clearly for the following parameters: a) $COD_{ww, discharge, BL, y}$ b) **ηCOD,BL,i** c) **ηCOD,PJ,i**	B.6.2	Response No. 1 The required corrections in the table for "*Measurement methods and procedures"* have been made for the following parameters: a) $COD_{ww, discharge, BL, y}$ b) **ηCOD,BL,i** c) **ηCOD,PJ,i** Response No. 2 The required information will only be available for each CPA individually. However, in the table "Choice of data or Measurement methods and procedures" template text is now indicated to remind the CPA implementer to define such information in in this field of the monitoring parameter. Response No. 3 In the PoA only a generic description is provided. The detailed information will be provided at CPA level.	B.6.2	Response No. 1 The requirements (text in bold) are not yet fully addressed Response No. 2 This has been specified in the Generic CPA-DD but not specified in the specific CPA-DD Response No. 3 OK, this is now indicated & accepted by the validation team CAR-g7.4 is resolved & closed
CAR-g08	Generic CPA Section B.6.3 See CAR-g06, accordingly the corresponding revisions are also applicable at Section B.6.3	B.6.3	Response No. 1 Revisions have been made in section B.6.3 to create consistency between revisions made in relation to CAR-g06.	B.6.3	Response No. 1 8.1) Guidelines For Completing The Programme Design Document Form For Small Scale CDM Programme of Activities, Version 02.0, EB 67, Annex 30, page 10, Section B.6.3 requirements are not fully complied yet

			Response No.2 The PoA-DD presently shows sample calculations for each equation used, substituting the values used in the equations to "[value]". Note that at PoA level it is not possible to input actual values.		Response No. 2 8.1) According to the Guidelines For Completing The Programme Design Document Form For Small Scale CDM Programme of Activities, Version 02.0, EB 67, Annex 30, page 10, Section B.6.3 *"Provide a sample calculation for each equation used, substituting the values used in the equations"* This is not yet demonstrated yet in the Generic CPA – DD Response No. 3 8.1) Since the actual calculation has been demonstrated at specific CPA-DD level & also tables have been created to show clearly how would each value will be substituted & calculate for each equation, hence, the validation team accepted the justification CAR-g8.1 is resolved & closed
			Response No. 1 The text has been replaced with a reference to section B.6.1 that explains how the CODin and CODout values shall be determined for each scenario that is applicable for inclusion under	B.6.3	Response No. 1

			the PoA. Response No.2: Since the information used to determine parameters such as the CODin and CODout will vary per project, the following information has been added to the PoA-DD section B.6.1: *"In determining the baseline emissions, past historic records (e.g. COD removal efficiency (CODin and CODout, SGR_{BL} and SGR_{PJ} etc) of the wastewater treatment systems, the amount of dry matter in sludge, power and electricity consumption per m^3 of wastewater treated, the amount of final sludge generated per tonne of COD removed) of at least one year prior to the project implementation shall be used. If the historical data is not available or for the case of Greenfield projects and capacity addition projects, a baseline measurement campaign should be undertaken for at least 10 days before project implementation. The average values from the measurement campaign shall be multiplied by 0.89 to account for the uncertainty range (30% to 50%)*		 8.2) Please clarify the differences for the 2 sentences highlighted in yellow above – PoA-DD page 73 Response No. 2 OK, this has been referenced in Section B.6.1 but cannot be found at all in that section. Please clarify Response No. 3 OK, this is now being referenced in Section B.6.1 & clarified CAR-g8.2 is resolved & closed

			and used for estimating emissions associated with the prevailing baseline. *For existing wastewater treatment plant that has been operating for at least three years and if one year of historical data is not available, the procedures described in paragraph 27 of AMS.III.H shall be followed.* *For Greenfield and capacity addition projects, procedures described in paragraph 28 of AMS.III.H version 16 shall be followed. The approach (e.g. past historic records, 10-day measurement campaign, value from manufacturer/designer) and the associated data which are selected and applied in determining the baseline emissions shall be recorded under Annex 3 of the CPA-DD."*		
			Response No. 1 The text has been replaced with a reference to section B.6.1 that explains how the CODin and CODout values shall be determined for each scenario that is applicable for inclusion under	B.6.3	Response No. 1 8.3) AMS-III.H Version 16 paragraph 27 & 28 demonstration are not fully consistent with descriptions in the PoA-DD page 73

			the PoA. Response No. 2 The paragraph of PoA-DD page 75 has been updated in line with what is described in section B.6.1 and is now consistent with AMS-III.H Version 16 paragraph 27 & 28.		Response No. 2 8.3) Previous comment in Response 1 still applies. See Generic CPA-DD page 75 – still inconsistent with paragraph 27 & 28 of AMS-III.H Version 16  See CAR-g8.2 above Response No. 3 This has been corrected & refers to Section B.6.1 & consistent with the methodology

					CAR-g8.3 is resolved & closed
			Response No. 1 The figures have been replaced by "[Value]" in order for the CPA to complete the exact value applicable for the CPA.	B.6.3	Response No. 1 8.4) Incorrect value specified for $MCF_{s,BL,final}$ in PoA-DD page 76 Response No. 2 8.4) OK, this has been revised & indicating [Value] is accepted since this is specific at CPA level CAR-g8.4 is resolved & closed
CAR-g09	Generic CPA Section B.7.1 9.1) See CAR-g07, accordingly the corresponding revisions are also applicable at Section B.7.1	B.7.1	Response No. 1 Revisions have been made in section B.7.1 to create consistency between revisions made in relation to CAR-g06.	B.7.1	Response No. 1 Will be final checked after all findings below are rectified Response No. 2 OK, this has been added accordingly in B.7.1 CAR-g09.1 is resolved & closed
	Generic CPA Section B.7.1 9.2) According to the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement: *"Measurement methods and procedures"* *"QA/QC procedures"* It was found in the Generic CPA, the descriptions of measurement methods &	B.7.1	Response No. 1 Generic CPA Section B.7.1 has been revised to comply with the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement in relation to the monitoring parameter table	B.7.1	Response No. 1 9.2.1) Parameter $EG_{facility,y}$ *"Calibration of energy meter (s) will be undertaken at least once in three years, as prescribed in paragraph 17 (c) of General Guidelines to SSC Methodologies."* → for VVS track, applicable *General Guidelines to SSC Methodologies is Version*

	procedures are often **mixed up with monitoring frequency, source of data and QA / QC procedures or monitoring frequency** not in according to the methodology requirements for monitoring parameters e.g. for the following parameters: a) $EG_{BL,y}$ (which is also wrong parameter) b) $Q_{ww,l,y}$ c) Q_w d) $COD_{ww,untreated,y}$ e) $COD_{ww,treated,y}$ f) $COD_{PJ,outflow,k}$ g) $COD_{ww,discharge,y}$ h) $BG_{burnt,y}$ i) $W_{ch4,y}$ j) T k) P l) T_{flare} m) Other flare parameters		content for *"Measurement methods and procedures" and "QA/QC procedures"* EGBL,y has been renamed to $EG_{facility,y}$ Response No. 2 The text has been revised to "Meter will be calibrated periodically as per national standard." Response No.3 The statement has been revised to "relevant standard."		*18. Paragraph 17 (c) only applicable if General Guidelines to SSC Methodologies Version 17 is used (VVM track only)* *However, calibration requirements are not specified in General Guidelines to SSC Methodologies* Please refer to Clean Development Mechanism Project Standard, Version 02.0, EB 70, Annex 2, Paragraph 56 (f) page 14 Response No. 2 9.2.1) But why only limit to national standard? Response No. 3 9.2.1) But why only limit to applicable standard? Response No. 4 OK, it has been revised & refers to applicable relevant industry standard, local / national standard, or as per manufacturer's specifications CAR-g9.2.1 is resolved & closed
			Response No.1 Parameter FE – monitoring	B.7.1	Response No.1 9.2.2) Parameter FE – monitoring

			frequency & QA /QC procedures are now specified Response No.2 The arrangement for flare efficiency when using the open or enclosed flare has now been indicated under “any comment” in the table for monitoring parameter as per Tool to determine project emissions from flaring gases containing methane”, EB 28, Annex 13 page 10, Step 6. Note that all CPA will apply the simplified approach using default values. Response No. 3 The information regarding the flare efficiency is now indicated in the specific CPA-DD in parameter $\eta flare,h$ in section D.7.1 of the specific CPA-DD.		frequency & QA /QC procedures are not yet specified Response No. 2 9.2.2) Although the monitoring frequency & QA/QC procedures have been specified, however it is not clearly defined for scenarios involving enclosed flares & continuous monitoring / use of default values OR in the case of open flares? See “Tool to determine project emissions from flaring gases containing methane”, EB 28, Annex 13 page 10, Step 6 Response No. 3 9.2.2) OK, this has been revised & updated in Generic CPA-DD but however not yet reflected in Specific CPA-DD Response No. 4 OK, this is now corrected & updated in the Generic CPA-DD CAR-g9.2.2 is resolved & closed
			The parameters a) $fv_{i,h}$ b) $FV_{RG,h}$ c) T_{flare} d) Other flare operation parameters	B.7.1	Response No. 1 9.2.3) The following parameters – source of data / measurement methods & procedures / monitoring frequency / description are inconsistent with the “Tool to

			Have been revised to comply with the requirements of the "Tool to determine project emissions from flaring gases containing methane", EB 28, Annex 13.		determine project emissions from flaring gases containing methane", EB 28, Annex 13 a) $fv_{i,h}$ b) $FV_{RG,h}$ c) T_{flare} d) Other flare operation parameters Response No. 2 9.2.3) Checked all parameters listed above & confirmed the source of data / measurement methods & procedures / monitoring frequency / description are now consistent with the "Tool to determine project emissions from flaring gases containing methane", EB 28, Annex 13 CAR-g9.2.3 is resolved & closed
	9.3) According to the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement: *"Measurement methods and procedures": Where data or parameters are to be monitored,* ***specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the***	B.7.1	Response No. 1 Generic CPA Section B.7.1 has been revised to comply with the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement in relation to the information for "*Where data or parameters are to be monitored, specify the measurement methods and procedures,*	B.7.1	Response No. 1 *"……standards to be applied, ……., person/entity responsible for the measurements"* ➔ Not yet specified

	measurements, and, in case of periodic measurements, the measurement intervals; The requirements above are not consistently specified for most of the monitoring parameters in the Generic CPA		*standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals"* Response No. 2 The required information will only be available for each CPA individually. However, in the table "Measurement methods and procedures" template text is now indicated to remind the CPA implementer to define such information in in this field of the monitoring parameter. Response No. 3. The statement has now been applied to all monitoring parameters listed in section B.7.1 of the PoA-DD.		Response No. 2 OK, this statement is accepted but why it is not reflected for all parameters to be monitored consistency? Response No. 3 Same as above Response No. 4 OK, this has been stated consistently in the PoA-DD Section B.7.1 CAR-g9.3 is resolved & closed
	9.4) According to the Guidelines for Completing the Programme Design Document Form for Small- Scale CDM Programme of Activities, EB 66, Annex 13, Version 01.0 requirement:	B.7.1	Response No. 1 *QA/QC procedures are now consistently described in section B.7.1 of the PoA-DD.*	B.7.1	Response No. 1 Will be re-checked after closure of CAR items 9.2 & 9.3 Response No. 2

	"QA/QC procedures": Describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable; This is not consistently described for each monitoring parameters		Response No. 2 Calibration procedures are now defined for the following parameters in the table "QA/QC procedures": a) All COD related parameters b) $S_{final,PJ,y}$ Response No. 3 Calibration procedures are now defined in the table "QA/QC procedures.		Calibration procedures are not yet defined for the following parameters: a) All COD related parameters b) $S_{final,PJ,y}$ Response No. 3 Same as above Response No. 4 OK, the calibration procedures have been specified for parameters listed above CAR-g9.4 is resolved & closed
	9.5) End use of the final sludge has not been included as one of the monitoring parameter	B.7.1	Response No. 1 End use of the final sludge has now been included as one of the monitoring parameter section B.7.1	B.7.1	Response No. 1 OK, this parameter has been added in Generic CPA-DD Section B.7.1 CAR-g9.5 is resolved & closed
	9.6) Parameter $BG_{burnt,y}$ Please confirm whether $BG_{recover}$ / $BG_{fuelled}$ / BG_{flare} are all applicable / monitored separately?	B.7.1	Response No. 1 Only $\mathbf{BG_{burnt,y}}$ and $\mathbf{BG_{flare}}$ will be monitored. Both parameters will be monitored separately.	B.7.1	Response No. 1 OK, this clarified in the parameter $BG_{burnt,y}$ & accepted by the validation team CAR-g9.6 is resolved & closed
	9.7) Monitoring parameters applicable for open / enclosed flares are not yet included according to the "Tool to determine project emissions from flaring	B.7.1	Response No. 1 Revisions have been made to make the monitoring parameters for the flare consistent with the	B.7.1	Response No. 1 OK, the parameters have been added, however please see item 9.2.3 above

	gases containing methane", EB 28, Annex 13, page 10, Step 6 Determination of the hourly flare efficiency - In case of enclosed flares and continuous monitoring / In case of enclosed flares and use of the default value		"Tool to determine project emissions from flaring gases containing methane", i.e. the default value for methane density has been added to section B.6.4. Response No. 2 The corrections have been made. Please see item 9.2.3 above.		Response No. 2 OK, CAR-g9.2.3 has been resolved & closed Hence CAR-g9.7 is resolved & closed
	9.8) Incorrect units are used for the following parameters: a) FE b) $W_{CH4,\ y}$ c) $FC_{DIESEL,j,y}$; $FC_{FO,j,y}$; $FC_{COAL,j,y}$	B.7.1	Response No. 1 Unit has been revised for parameters: a) FE b) $W_{CH4,\ y}$ The unit has not been revised for the following parameters, because it will depend and revised on the actual situation of each specific CPA: c) $FC_{DIESEL,j,y}$; $FC_{FO,j,y}$; $FC_{COAL,j,y}$ Response No. 2 The unit has been revised to "Mass or volume unit per year (e.g. ton/yr or m3 /yr) for $FC_{DIESEL,j,y}$; $FC_{FO,j,y}$; $FC_{COAL,j,y}$. The exact unit used shall be indicated in the CPA specific.	B.7.1	Response No. 1 All are corrected except for $FC_{DIESEL,j,y}$; $FC_{FO,j,y}$; $FC_{COAL,j,y}$ Response No. 2 OK, the units specified (options) are in line with the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion" CAR-g9.8 is resolved & closed
	9.9) Wrong tool indicated for parameters $TDL_{j,y}$; $TDL_{k,y}$	B.7.1	Response No. 1 The content of the table has been revised to refer to the "Tool to	B.7.1	Response No. 1 Yes, the correct tool has been indicated now for $TDL_{j,y}$; $TDL_{k,y}$

			calculate baseline, project and/or leakage emissions from electricity consumption", Version 01 (EB 39 annex 7).		CAR-g9.9 is resolved & closed
	9.10) Description for the following parameter is inconsistent with the "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion" $EF_{CO2,DIESEL,y}$; $EF_{CO2,FO,y}$; $EF_{CO2,COAL,y}$	B.7.1	Response No. 1 Description for the parameter $EF_{CO2,DIESEL,y}$; $EF_{CO2,FO,y}$; $EF_{CO2,COAL,y}$ is now consistent with the "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion.	B.7.1	Response No. 1 9.10.1) Descriptions for $EF_{CO2,DIESEL,y}$; $EF_{CO2,FO,y}$; $EF_{CO2,COAL,y}$ is confirmed to be consistent with the tool CAR-s9.10.1 is resolved & closed
			Response No. 1 The description of the parameter $EG_{facility,y}$ has been revised to be consistent with the methodology.		Response No.1 9.10.2) Descriptions also inconsistent with AMS-I.D page 19 for parameter $EG_{facility,y}$ Response No. 2 9.10.2) OK, this is corrected & consistent now with AMS-I.D CAR-s9.10.2 is resolved & closed
			Response No.1 The description for parameter $COD_{untreated,y}$ is consistent with the methodology. Response No.2 The parameter has been renamed to $CODww,_{untreated,y}$ in line with the methodology.		Response No.1 9.10.3) Description for parameter $COD_{untreated,y}$ is incorrect Response No. 2 9.10.3) $COD_{ww,untreated,y}$, or $COD_{untreated,y}$? Response No. 3 OK, this is clarified & accepted by

					the validation team CAR-g9.10.3 is resolved & closed
CAR-g10	Documented electronic spread sheet containing calculation of the operating margin and build margin emission factors are not yet provided to the validation team, and not yet included in Generic CPA DD According to the "Tool to calculate the emission factor for an electricity system Version 02.2.1" page 20 & 21 *"The calculation of the operating margin and build margin emission factors should be documented electronically in a spread sheet that should be attached to the CDM-PDD"*	-	Response No. 1 Calculation of the emission factor is done at the CPA level, for each specific CPA since there are many grids in Indonesia. Hence, the required spread sheet is part of the document package for each CPA. The spread sheet of the real case CPA has been provided to the DOE as part of the real case CPA document package.	-	Response No. 1 OK, this will be checked at CPA level CAR-g10 is resolved & closed
CL-g01	PoA DD Section E.5.1 According to Section A. Microscale Projects (up to 5 MW): *Project activities up to five megawatt that employ renewable energy technology are additional if any one of the conditions below is satisfied: .....* *(b) The project activity is an off-grid activity supplying energy to households/communities (less than 12 hours grid availability per 24 hrs is also considered "off-grid" for this assessment);* *(c) The project activity is designed for distributed energy generation (not connected to a national or regional grid) with both conditions (i) and (ii) satisfied; .....*	B.5	Response No. 1 The section B.5, paragraph "Section A. Microscale Projects (up to 5 MW):" has been revised and simplified, and the irrelevant information has been removed.	B.5	Response No. 1 The revised section concerning the Microscale projects are accepted since 3 criteria for evaluation has been defined, in line with the guideline: a) Type III component emission reduction is at a scale of no more than 20 ktCO2e per year b) CPA capacity is below or equal to 5 MW c) CPA is undertaken in a special underdeveloped zone as defined by State Minister of Underdeveloped Zone Development Decree No. 001

	Please clarify whether these requirements are applicable because the PoA DD had earlier described clearly that the project will be grid connected only to the Indonesian National grid.				issued in 2005 CL-g01 is resolved & closed

CL-g02	PoA DD Section B.5 2.1) Please clarify why Generic CPA limits only WACC or ROE as the only benchmark to be considered. What about local commercial lending rate?	B.5	Response No. 1 The interest rate as plausible benchmark is now included in the section B.5 of the PoA-DD. Note that the indication in the table heading "Application to a typical CPA" is only of indicative nature and to provide guidance to the CPA implementer. It is possible to revise this in the CPA-DD template and hence the CPA implementer is free to revise as long as it meets the relevant EB guidance.	B.5	Response No. 1 OK, the interest rate is now included also as the suitable benchmark option for project IRR CL-g2.1 is resolved & closed
	2.2) Table II.B.5.3 Item 4 – Determine financial benchmark Please clarify whether pre – tax / post tax benchmark would be considered for each CPA?	B.5	Response No. 1 Pre – tax or post tax benchmark may be applied, depending on the specific CPA.	B.5	Response No. 1 OK, this issue is clarified & will be specifically defined for specific CPA CL.g2.2 is resolved & closed
	2.3) Table II.B.5.3 What about other additionality framework such as investment decision date? Validity of input parameters at the time of investment date? Investment analysis assessment period? Why these are not considered?	B.5	Response No. 1 Investment decision date is specified in the table Table II.B.5.4 only in order to avoid repetition of values.	B.5	Response No. 1 OK, this is added in Table II.B.5.4 CL-g2.3 is resolved & closed
	2.4) Table II.B.5.4 What about interest rate? Income tax?	B.5	Response No. 1 Income tax and interest rate are now included in table II.B.5.4	B.5	Response No. 1 OK, this is now added in the Table II.5.4 CL-s2.4 is resolved & closed

Appendix B

CERTIFICATES OF COMPETENCE

Qualification

Yong, Tau Lan (Nelly) /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes

EAC Scopes: (EAC Branchen)
CDM 01 - Energy industries (renewable - / non-renewable sources)
CDM 05 - Chemical industry
CDM 11 - Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride
CDM 12 - Solvents use
CDM 13 - Waste handling and disposal

Add. qualification: (zus. Qualifikation)

First Appointment: (Erstberufung)	10/28/2010	Valid to: (Gültig bis)	10/27/2013

Remarks:
TA 1.2 - renewable energies
TA 5.1 / 11.1 / 12.1 - Chemical Industries
TA 13.1 - Waste handling and disposal

Languages:
English
malay
Indonesian
Mandarin

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring: (letzte Beurteilung)

Next Monitoring: (nächste Beurteilung)

Remarks:

View / Edit Monitoring

History of scope allocation

Date:
Change:
By:
Reason:

Date:
Change:
By:
Reason:

Date:	2010-10-31
Change:	EAC CDM, CDM, CDM, CDM added
By:	Manfred Brinkmann
Reason:	TA 1.2 - renewable energies

History

Created:	10/26/2007 10:43:44 PM	Nelly Yong/MY/TUV
Modified:	04/27/2011 11:52:48 AM	Nelly Yong/MY/TUV
	11/23/2010 03:40:13 PM ZE9	Manfred Brinkmann/Jpn/TUV
	11/16/2010 02:20:46 PM ZE9	Manfred Brinkmann/Jpn/TUV
	11/04/2010 08:57:58 AM ZE9	Manfred Brinkmann/Jpn/TUV
	10/31/2010 09:23:50 PM ZE9	Manfred Brinkmann/Jpn/TUV
	10/31/2010 09:23:41 PM ZE9	Manfred Brinkmann/Jpn/TUV
	10/26/2007 10:44:04 PM	Nelly Yong/MY/TUV

Qualification

Zakaria, Azizan /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes
EAC Scopes: (EAC Branchen)	CDM 05 - Chemical industry CDM 11 - Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride CDM 12 - Solvents use CDM 13 - Waste handling and disposal		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	25/09/2011	Valid to: (Gültig bis)	24/09/2014

Remarks: Valid for TA 5.1/11.1/12.1
TA 13.1

Languages:

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

History of scope allocation

Date: 2012-03-29
Change: EAC CDM added

By:	Praveen Urs
Reason:	
Date:	2011-09-26
Change:	EAC CDM, CDM, CDM added
By:	Manfred Brinkmann
Reason:	Valid for TA 5.1/11.1/12.1

History

Created:	24/08/2011 11:42:34 AM	Azizan bin Zakaria/MY/TUV
Modified:	29/03/2012 07:50:57 PM	Praveen Urs/Chn/TUV
	26/09/2011 11:50:36 AM ZE9	Manfred Brinkmann/Jpn/TUV
	24/08/2011 11:42:54 AM	Azizan bin Zakaria/MY/TUV

Qualification

Ng, Siew Theng /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☐ yes
EAC Scopes: (EAC Branchen)	CDM 15 - Agriculture		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	11/01/2011	Valid to: (Gültig bis)	31/10/2014

Remarks: TA 15.1

Languages: English
malay
Indonesian

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

View / Edit Monitoring

History of scope allocation

Date: 2012-09-04
Change: EAC CDM added
By: Praveen Urs
Reason:

History

Created:	27/08/2012 04:55:55 PM	Carol Ng/MY/TUV
Modified:	04/09/2012 12:28:26 AM	Praveen Urs/Chn/TUV
	27/08/2012 04:56:06 PM	Carol Ng/MY/TUV

Export to ICMS

Last Export:

Qualification

Li, Lixin /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☒ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 03 - Energy demand CDM 02 - Energy distribution CDM 04 - Manufacturing industries		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	06/09/2010	Valid to: (Gültig bis)	05/09/2013

Remarks: Appointed as Technical Reviewer for TA 1.1, 1.2, 2.1, 2.2, 3.1
TA 4.5

Languages:

Experience Exchange

Date	Location	Remarks	Accreditation(s)
2010-12-21	Beijing	GC CDM Auditor Experience Exchange, Beijing, 2010-12-21to23	United Nations Framework Convention on Climate Change

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next Monitoring:
(nächste Beurteilung)

Remarks:

History of scope allocation

Date: 2012-03-10
Change: EAC CDM, CDM added

By: Praveen Urs
Reason:

Date:
Change:
By:
Reason:

Date:
Change:
By:
Reason:

Date: 2010-11-08
Change: EAC CDM, CDM added
By: Manfred Brinkmann
Reason: Appointed as Technical Reviewer for

History

Created:	13/08/2010 11:09:24 AM	Lixin Li/Bj/Chn/TUV
Modified:	06/07/2012 04:55:01 PM	Praveen Urs/Chn/TUV
	10/03/2012 08:33:44 PM	Praveen Urs/Chn/TUV
	12/02/2012 06:12:39 PM	Praveen Urs/Chn/TUV
	15/11/2010 04:02:03 PM	
	15/11/2010 04:01:56 PM	
	08/11/2010 09:36:09 AM ZE9	
	08/11/2010 09:28:17 AM ZE9	
	08/11/2010 09:28:07 AM ZE9	
	08/11/2010 09:27:39 AM ZE9	
	13/08/2010 11:09:41 AM	

Export to ICMS

Last Export:

Qualification

Tang, Walter /

Emission Trading
United Nations Framework Convention on Climate Change

Auditor No.: (AuditorenRegNr)			
Appointed: (Zugelassen)	☒ ja	Qualification Level: (Qualifikationsstufe)	Lead Auditor
External: (Externer)	☐ ja	Add. reviewer: (Zusätzlicher Prüfer)	☒ yes
EAC Scopes: (EAC Branchen)	CDM 01 - Energy industries (renewable - / non-renewable sources) CDM 02 - Energy distribution CDM 03 - Energy demand CDM 13 - Waste handling and disposal CDM 04 - Manufacturing industries		
Add. qualification: (zus. Qualifikation)			
First Appointment: (Erstberufung)	11/10/2011	Valid to: (Gültig bis)	11/09/2015

Remarks:	Appointed as Technical Reviewer for TA 1.1, 1.2, 2.1, 2.2, 3.1 Direct work experience. TA 4.3, 4.5, 13.1 based on Annex D para 9 of the Accrediation Standard
Languages:	Chinese simplified English

Experience Exchange

Date	Location	Remarks	Accreditation(s)

Monitoring

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

Remarks:

History of scope allocation

Date:	2012-02-13
Change:	EAC CDM added
By:	Praveen Urs
Reason:	

Date:	2012-02-13
Change:	EAC CDM, CDM, CDM, CDM added
By:	Praveen Urs
Reason:	

History

Created:	06/12/2011 05:00:51 PM	Walter Tang/Chn/TUV
Modified:	06/07/2012 04:47:48 PM	Praveen Urs/Chn/TUV
	02/07/2012 03:08:57 PM	Praveen Urs/Chn/TUV
	02/07/2012 03:08:48 PM	Praveen Urs/Chn/TUV
	15/05/2012 03:30:46 PM	
	13/02/2012 08:00:10 PM	
	06/12/2011 05:01:30 PM	

Export to ICMS

Last Export: