



POA VALIDATION REPORT

“PROGRAMMATIC CDM PROJECT USING MUNICIPAL ORGANIC WASTE OF 64 DISTRICTS OF BANGLADESH” IN BANGLADESH

REPORT No. 2014-9126

REVISION No. 02

DET NORSKE VERITAS



POA VALIDATION REPORT

Date of first issue: 5 May 2014	ConCert Project No.: PRJC-500444-2014-CCS-IND
Approved by: Michael Lehmann	Organisational unit: Accredited Climate Change Services
Client: Waste concern consultants	Client ref.: Mr. Iftexhar Enayetullah

DNV CLIMATE CHANGE
SERVICES AS

Veritasveien 1,
1322 HØVIK, Norway
Tel: +47 67 57 99 00
Fax: +47 67 57 99 11
http://www.dnv.com
Org. No: NO 994 774 352 MVA

Summary:

Title of PoA: Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh

Country: Bangladesh

Methodology: AMS-III.F

Version: 11

GHG reducing Measure/Technology: Avoidance of methane emissions through composting

Sectoral scope(s): 13 - Waste handling and disposal

ER estimate of 1st CPA: 6 978 tCO₂e per year (average)

Size ☐ Large Scale ☒ Small Scale

Validation Phases:

☒ Desk Review ☒ Follow up interviews

☒ Resolution of outstanding issues

Validation Status

☐ Corrective Actions Requested

☐ Clarifications Requested

☒ Submission for registration

☐ Rejected

In summary, it is DNV's opinion that the programme of activity "Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh", as described in the PoA-DD, version 04 of 10 December 2014, meets all relevant UNFCCC requirements for the CDM and correctly applies the baseline and monitoring methodology AMS-III.F, version 11. Hence DNV requests the registration of the PoA as a CDM programme of activity.

Report No.: 2014-9126	Subject Group: Environment
Report title: "Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh" in Bangladesh	
Work carried out by: Thamizharasi Kaliaperumal and Kakaraparthi Venkata Raman	
Work verified by: Krishnan Namboodiri	
Date of this revision: 28 December 2014	Rev. No.: 02
Number of pages: 27	

Indexing terms

Key words
Climate Change
Kyoto Protocol
Validation
Clean Development Mechanism

- ☒ No distribution without permission from the client or responsible organisational unit
- ☐ free distribution within DNV after 3 years
- ☐ Strictly confidential
- ☐ Unrestricted distribution

© 2009 Det Norske Veritas AS

All rights reserved. This publication or parts thereof may not be reproduced or transmitted in any form or by any means, including photocopying or recording, without the prior written consent of Det Norske Veritas AS.



<i>Table of Content</i>	<i>Page</i>
1 EXECUTIVE SUMMARY – VALIDATION OPINION	1
2 INTRODUCTION	2
2.1 Objective	2
2.2 Scope	2
3 METHODOLOGY	3
3.1 Document review	3
3.2 Follow-up actions	5
3.3 Closing out of validation findings	7
3.4 Internal quality control	9
3.5 Validation team	9
4 VALIDATION FINDINGS	10
4.1 Comments by Parties, stakeholders and NGOs	10
4.2 Approval, authorization and contribution to sustainable development	10
4.3 Modalities of communications	10
4.4 PoA design and description of each generic CPA	10
4.5 Demonstration of additionality for PoA	11
4.6 Demonstration of additionality of each generic CPA	11
4.7 Eligibility criteria for including CPAs to the PoA	12
4.8 Application of methodologies	17
4.9 Management system of the PoA	17
4.10 Environmental impacts	17
4.11 Local stakeholder consultation	17
4.12 Application of selected baseline and monitoring methodology(ies) by each generic CPA	18
4.13 Project boundary of each generic CPA	20
4.14 Baseline scenario identification and description for each generic CPA	21
4.15 Algorithms and/or formulae used to determine emission reductions of each generic CPA	21
4.16 Monitoring plan	26
Appendix A PoA and generic CPA validation protocol	
Appendix B Curricula vitae of the validation team members	



Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CPA-DD	CDM component project activity design document
CH ₄	Methane
CL	Clarification request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CME	Coordinating and Managing Entity
CPA	Component project activity
DNV	DNV Climate Change Services AS
DNA	Designated National Authority
EIA	Environmental Impact Assessment
FAR	Forward Action Request
FAQ	Frequently asked questions
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of approval
MSW	Municipal Solid Waste
N ₂ O	Nitrous oxide
NGO	Non-governmental Organisation
MoC	Modalities of communication
ODA	Official Development Assistance
PoA	Programme of activities
PoA-DD	CDM programme of activities design document
PS	Clean Development Mechanism Project Standard
tCO ₂ e	Tonnes of CO ₂ equivalents
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation and Verification Standard



1 EXECUTIVE SUMMARY – VALIDATION OPINION

DNV Climate Change Services AS (DNV) has performed a validation of the programme of activity (PoA) “Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh” in Bangladesh including generic information relevant to all component project activities (CPAs) to be included in this PoA. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the PoA design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

The host Party is Bangladesh. The host Party fulfils the participation criteria and has approved the PoA and authorized the project participant Department of Environment of the Government of Bangladesh. The DNA from Bangladesh confirmed that the PoA assists in achieving sustainable development.

The PoA correctly applies the baseline and monitoring methodology AMS-III.F, version 11 “Avoidance of methane emissions through composting”.

By composting the MSW, the programme results in reductions of CH₄ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PoA and typical component project activities (CPAs) are not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the PoA.

The total emission reductions from the first component project activity (CPA 01) are estimated to be on the average 6 978 tCO₂e per year.

The monitoring plan provides for the monitoring of the PoA’s emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the PoA design, and it is DNV’s opinion that the project participants are able to implement the monitoring plan.

In summary, it is DNV’s opinion that the PoA “Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh” in Bangladesh, as described in the PoA-DD, version 04 dated 10 December 2014 meets all relevant UNFCCC requirements for the CDM and correctly applies the baseline and monitoring methodology AMS-III.F, version 11. Hence, DNV requests the registration of the PoA as a CDM PoA.

Bangalore and Oslo, 28 December 2014

Kakaraparthi Venkata Raman
Validator

Michael Lehmann
Director of Services and Technologies
DNV Climate Change Services AS



2 INTRODUCTION

Waste concern consultants, authorized by the project participant “Department of Environment of the Government of Bangladesh” has commissioned DNV Climate Change Services AS (DNV) to perform a validation of the proposed small-scale CDM Programme of Activities (PoA) “Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh” in Bangladesh (hereafter called “PoA”). This report summarises the findings of the validation of the PoA including generic information relevant to all component project activities (CPAs) to be included in this PoA, performed on the basis of UNFCCC criteria for CDM PoAs, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project activities and the subsequent decisions by the CDM Executive Board.

2.1 Objective

The purpose of a validation is to have an independent third party assess the small-scale PoA design document (PoA-DD) including the description of the generic component project activity (CPA) with generic information relevant to all CPAs to be included in this PoA. 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).

2.2 Scope

The validation scope is defined as an independent and objective review of the PoA-DD including the description of the generic component project activity (CPA) with generic information relevant to all CPAs to be included in this PoA. The PoA-DD was reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities, Standard for the demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-III.F (version 11) /23/.

The validation of the programme has also considered the completed CPA-DD for the CPA with the title “Composting of Municipal Solid Waste of Mymensingh Pourashava Area, CPA No. 01” submitted together with the PoA-DD.

The validation was carried out in accordance with the principles and the requirements for validation contained in the Validation and Verification Standard /18/.

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



3 METHODOLOGY

The validation consisted of the following three phases:

- I document review
- II follow-up actions (e.g. on-site visit and telephone or email interviews)
- III the closing out of validation findings and the issuance of the final validation report and opinion

The following sections outline each step in more detail.

3.1 Document review

The following tables list the documentation that was reviewed during the validation.

3.1.1 Documentation provided by the project participants

- /1/ Department of Environment, Government of Bangladesh: CDM-SSC-PoA-DD for project activity “Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh” in Bangladesh, version 01 dated 18 March 2014 and version 04 dated 10 December 2014.
- /2/ Department of Environment, Government of Bangladesh: CDM-SSC-CPA-DD for CPA titled “Composting of Municipal Solid Waste of Mymensingh Pourashava Area, CPA No. 01”, version 00 dated 18 March 2014 and version 4 dated 10 December 2014.
- /3/ Department of Environment, Government of Bangladesh: Emission reduction calculation spreadsheet associated with the PoA-DD and CPA-DD
- /4/ Center for Environmental and Geographic Information Services: Baseline survey on waste generation and characteristic analysis dated January 2013
- /5/ Department of Environment, Government of Bangladesh: MoU between Department of Environment and Mayor of Mymensingh Municipality to collaborate on “Implementing Programmatic CDM Project using Municipal Solid Waste of Mymensingh” dated 9 May 2012
- /6/ Waste concern consultants: Waste collection data for Mymensingh – for the month of April 2014
- /7/ Mymensingh municipality, Government of Bangladesh: Plant layout of CPA 01
- /8/ Waste concern consultants: List of licensee – eligible to produce and sell compost
- /9/ Department of Environment, Government of Bangladesh: Checklist on the eligibility criteria for CPA 01.
- /10/ Mymensingh municipality, Government of Bangladesh: Layout of the existing landfill showing the depth of the landfill.
- /11/ Mymensingh municipality, Bangladesh: Confirmation letter on “No double counting and no ODA fund” dated 12 May 2014.
- /12/ Department of Environment, Government of Bangladesh: Newspaper advertisement for stakeholders meeting on 22 April 2014 of CPA 01, dated 14 April 2014, both in English and local language.
- /13/ Department of Environment, Government of Bangladesh: Minutes of meeting of stakeholders meeting held on 22 April 2014 for CPA 01 along with the list of participants.



- /14/ Department of Environment, Government of Bangladesh: Declaration related to CPA 01 on the following dated 28 May 2014
 - a. No ODA fund used for the project activity
 - b. CPA 01 is not part of any registered PoA or any individual CDM project
 - c. Not a debundled component of any large scale project
 - d. CPA 01 will use only grid electricity.
- /15/ Department of Environment, Government of Bangladesh: Notification of award to Md. Monjurul Haque Monju & M/S Nihad Builders and Suppliers (JV) for the execution of works for construction of compost plant for Mymensingh municipality dated 18 May 2014.
- /16/ Department of Environment, Government of Bangladesh: MOC details for the PoA.

3.1.2 Letters of approval

- /17/ National CDM Committee, Department of Environment (DNA of Bangladesh): *Letter of approval* dated 16 March 2014.

3.1.3 Methodologies, tools and other guidance by the CDM Executive Board

- /18/ CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 07.0
- /19/ CDM Executive Board: Clean Development Mechanism Project Standard, version 07.0
- /20/ CDM Executive Board: Clean Development Mechanism Project Cycle Procedure, version 07.0
- /21/ CDM Executive Board: Standard for the demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities, version 03.0
- /22/ CDM Executive Board: Standard for sampling and surveys for CDM project activities and programme of activities, version 04.1
- /23/ CDM Executive Board: Baseline and monitoring methodology AMS-III.F, version 11
- /24/ CDM Executive Board: Tool to calculate emissions from solid waste disposal sites, version 6.0.1
- /25/ CDM Executive Board: Tool to calculate baseline, project and/or leakage emissions from electricity consumption, version 1.
- /26/ CDM Executive Board: Project and leakage emissions from composting, version 1.
- /27/ CDM Executive Board: Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion, version 2.
- /28/ CDM Executive Board: Template - Programme design document form for small-scale CDM programmes of activities, version 03.0
- /29/ CDM Executive Board: Template - Component project design document form for small-scale CDM component project activities, version 3.0
- /30/ CDM Executive Board: Guideline for demonstrating additionality of microscale project activities, version 5.0
- /31/ IPCC 2006 Guidelines for National Greenhouse Gas Inventories
- /32/ CDM Executive Board: Standard for application of the global warming potentials to Clean Development Mechanism project activities and programmes of activities for the



second commitment period of the Kyoto protocol, version 1.0

Also, referred the FAQ section of UNFCCC under methodologies for the GWPs of II commitment period

<http://cdm.unfccc.int/faq/index.html>

/33/ CDM Executive Board: Glossary – CDM terms, version 07.0

3.1.4 Documents used by DNV to validate / cross-check the information provided by the project participants

- /34/ Department of Environment, Government of Bangladesh: Requirement of EIA for different project categories.
- /35/ Department of Environment, Government of Bangladesh: Compilation of Environmental laws of Bangladesh administered by the Department of Environment – republished in 2003
- /36/ Department of Environment, Government of Bangladesh: National 3 R strategy for Waste management dated December 2010
- /37/ Waste concern consultants: Training details – conducted for the project activity
- /38/ Department of Environment, Government of Bangladesh: Compost standard of Bangladesh
- /39/ Environment and Forest ministry, Government of Bangladesh: Issuance of approval of Government order for the project activity, with project cost details.
- /40/ Asian development bank: Report on “Action plan for solid waste management” dated March 2005, referred as an evidence to establish that it is a common practice in Bangladesh to disposed off the waste in solid disposal site.
- /41/ Department of Environment, Government of Bangladesh: Final report on baseline survey on waste generation, character analysis and traffic volume survey in Bangladesh dated Januray 2013.
- /42/ Department of Environment, Government of Bangladesh: Memo on “Appointment of operator for the compost plant in Mymensingh” – having the 200 km restriction criterion for the operator, dated 22 May 2014.
- /43/ Department of Environment, Government of Bangladesh: Memo on the approval of the environmental monitoring plan (which is the part of the initial environmental examination), dated 9 May 2014, along with the approved EIA for CPA 01 under this PoA.
- /44/ Department of Environment, Government of Bangladesh: Memo on the confirmation of usage of only grid electricity in CPA-01, dated 8 May 2014.
- /45/ Department of Environment, Government of Bangladesh: Letter to the waste concern consultants on the confirmation of Mr Abul Kalam Azad as the focal person and signature in the MOC form, dated 29 May 2014.
- /46/ Weblink on climate of Bangladesh – accessed last on 20 December 2014.
<http://www.discoverybangladesh.com/meetbangladesh/climate.html>

3.2 Follow-up actions

From 28 to 30 April 2014, DNV visited the CME’s office, project consultant’s office and the location of CPA-01 and performed interviews with PoA stakeholders.



	Date / Type of interview	Name / Organization	Topic
/47/	28 April 2014 <input type="checkbox"/> On-site <input checked="" type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	1. Mr A M Mousural Alan – Director, Department of Environment 2. Mr Md Abul Kalam Azad – Deputy project director, programmatic CDM 3. Mr Md Shamsur Rahman – Monitoring officer, CDM project 4. Mr Iftekhar Enayetullah – Managing partner, Waste concern consultants 5. Mr Kresten Holm – Consultant DEM 6. Mr A H Md Magsood Sinha - Managing partner, Waste concern consultants	<ul style="list-style-type: none"> • Project description and technology employed by the project activity • Applicability of methodology and tools • Project boundary • Baseline determination • Assessment and demonstration of additionality • Monitoring requirements and monitoring plan • Emission reduction calculation.
/48/	29 April 2014 <input checked="" type="checkbox"/> On-site <input checked="" type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	1. Mr A H Md Magsood Sinha - Managing partner, Waste concern consultants 2. Mr A K M Tariqul Alam – Chief executive officer, Mymensingh Pourashava 3. Mr Md Asif Hossain – Acting Mayor of Mymensingh 4. Mr Kresten Holm – Consultant DEM	<ul style="list-style-type: none"> • Project management system • Environmental impact assessment • Project details of CPA 01
/49/	20 April 2014 <input type="checkbox"/> On-site <input checked="" type="checkbox"/> Face-to-face at office <input type="checkbox"/> Telephone <input type="checkbox"/> E-mail	1. Mr Iftekhar Enayetullah – Managing partner, Waste concern consultants 2. Mr Kresten Holm – Consultant DEM 3. Mr A H Md Magsood Sinha - Managing partner, Waste concern consultants	<ul style="list-style-type: none"> • Sustainability assessment • Environmental impact assessment • Local stakeholders consultation • Project management • Compliance to Legal and statutory norms.



3.3 Closing out of validation findings

The objective of this phase of the validation was to resolve any issues which needed be clarified prior to DNV's conclusion on the PoA's compliance with applicable CDM requirements. In order to ensure transparency a validation protocol was customised for the PoA. The protocol shows in a transparent manner the criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a PoA is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of four tables. The different columns in these tables are described in the figure below. The completed validation protocol for the PoA "Programmatic CDM project using Municipal Organic Waste of 64 Districts of Bangladesh" in is enclosed in Appendix A to this report.

Table 2 of the validation protocol documents the findings of the desk review of the PoA design documentation and follow-up interviews with PoA stakeholders. Any findings raised in Table 2 are listed in Table 3 of the protocol, and changes to the description of the PoA design as a result of these findings are addressed in Table 3. Table 2 thus may not reflect all aspects of the PoA as described in the final PoA-DD submitted for registration.

A corrective action request (CAR) is raised if one of the following occurs:

- (a) The project participants have made mistakes that will influence the ability of the PoA to achieve real, measurable additional emission reductions;
- (b) Applicable CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

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

The validation identified eight CARs and four CLs. No FAR has been identified. The CARs and CLs were satisfactorily addressed by the project participants by among other revising the PoA-DD (please refer to Table 3 in Appendix A for further details). In addition to the changes made to the PoA-DD as a result of the validation findings, the following changes in the PoA-DD (version 04 dated 10 December 2014) /1/ were made compared to the version of the PoA-DD published for stakeholder comments (version 01 dated 18 March 2014):

- Eligibility criteria in section "Part I - B.2 Eligibility criteria for inclusion of a CPA in the PoA" of the revised PoA-DD is made consistent with the details presented in the section "Part II – B.5 Demonstration of eligibility for a generic CPA".
- The PoA-DD has been revised to adopt the latest version of PoA-SSC-DD template.



Validation Protocol Table 1: Mandatory Requirements for CDM programme of activities (PoA)				
Requirement	Reference	Conclusion		
The requirements the PoA must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK) or a corrective action request (CAR) if a requirement is not met.		

Validation Protocol Table 2: Requirement Checklist				
Checklist question	Reference	Means of verification (MoV)	Assessment by DNV	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the PoA should meet. The checklist is organised in different sections, following the logic of the PoA-DD	Gives reference to documents where the answer to the checklist question or item is found.	Means of verification (MoV) are document review (DR) , interview (I) or any other follow-up actions (e.g., on site visit and telephone or email interviews) and cross-checking (CC) with available information relating to projects or technologies similar to the proposed CDM PoA under validation.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with the checklist question so far.	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. A corrective action request (CAR) is raised when project participants have made mistakes, the CDM requirements have not been met or there is a risk that emission reductions cannot be monitored or calculated. A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. A forward action request (FAR) during validation is raised to highlight issues related to PoA implementation that require review during the first verification of the PoA.

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Corrective action and/or clarification requests	Ref. to checklist question in table 2	Response by project participants	Validation conclusion
The CARs and/ or CLs raised in Table 2 are repeated here.	Reference to the checklist question number in Table 2 where the CAR or CL is explained.	The responses given by the project participants to address the CARs and/or CLs.	The validation team's assessment and final conclusions of the CARs and/or CLs.

Validation Protocol Table 4: Forward Action Requests		
Forward action request	Ref. to checklist question in table 2	Response by project participants
The FARs raised in Table 2 are repeated here.	Reference to the checklist question number in Table 2 where the FAR is explained.	Response by project participants on how forward action request will be addressed prior to first verification.

Figure 1: Validation protocol tables



3.4 Internal quality control

The validation report underwent a technical review performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3.5 Validation team

<i>Role</i>	<i>Last Name</i>	<i>First Name</i>	<i>Country</i>	<i>Type of involvement</i>					
				Desk review	Site visit / Interviews	Reporting	Supervision of work	Technical review	TA 13.1 competence
Team leader (Validator)	Kakaraparhi	Venkata Raman	India	✓	✓	✓	✓		✓
Validator	Kaliaperumal	Thamizharasi	India	✓	✓	✓			
Technical reviewer	Namboodiri	Krishnan	India					✓	✓

The qualification of each individual validation team member is detailed in Appendix C to this report.



4 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 PoA design as documented and described in the PoA-DD, version 04 dated 10 December 2014 /1/.

4.1 Comments by Parties, stakeholders and NGOs

The PoA-DD, version 1.0 dated 18 March 2014 (CL 1) was made publicly available on the CDM website (<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/A9KIAK5VGTYVSBGGQXGRWK4196MTEFG/view.html>) and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 20 March 2014 to 18 April 2014. No comments were received during the above mentioned 30 days period.

4.2 Approval, authorization and contribution to sustainable development

The coordinating/managing entity (CME) of the PoA and project participant is the Department of Environment (DoE) under the Ministry of Environment and Forests which is the entity that communicates with the Board.

The host Party is Bangladesh and meets all relevant participation requirements.

A letter of approval (LoA) was issued by DNA of Bangladesh on 16 March 2014, authorizing Department of Environment as CME and project participant and confirming that the PoA assists in achieving sustainable development /17/.

The letter of approval was received from the project participant. DNV does not doubt the authenticity of the letter of approval. DNV considers the letter is in accordance with paragraphs 39-42 of the VVS /18/.

4.3 Modalities of communications

DNV has performed due diligence on the Modalities of Communications (MoC) statement /16/ submitted by the project participants in accordance with applicable requirements in the VVS as documented in section A.4 of Table 2 in the validation protocol in Appendix A to this report. DNV was able to confirm the information contained in the MoC and that the MoC complies with all relevant forms and requirements /45/.

4.4 PoA design and description of each generic CPA

The objective of the programme of activity (PoA) is to avoid the methane emissions from municipal waste landfills in Bangladesh by undertaking composting of wastes and using the organic matter in wastes. The PoA involves construction of composting production facility to produce and sell “compost” to apply the same in the agricultural farms in Bangladesh.

This is a small-scale PoA, in that all CPAs will apply the small scale methodology AMS-III.F /23/ and their emission reductions per CPA will not exceed the micro scale threshold of 20 000 tCO₂e /30/. Both conditions have been included in the PoA’s inclusion criteria for CPAs.



The starting date of the PoA is clearly defined and has been set on the 20 March 2014 /1/, which is the date when the PoA-DD was published for global stakeholder consultation. This is in consistent with the definition of starting date provided in the Glossary of CDM terms. CPAs will have a starting date on or after the PoA starting date /33/.

The PoA-DD clearly indicates that the length of the proposed PoA is 28 years /1/.

The programme's spatial boundaries are clearly defined in the PoA-DD /1/ and consist of the geographical boundary of the Bangladesh. The project boundaries of each are clearly defined in the PoA-DD in terms of sources of GHG included and excluded. In particular, the project boundaries will include equivalent CO₂ (CH₄) emissions from decomposition of waste at the landfill site both in the baseline and in the project scenario. The boundaries defined are in accordance with the methodology that CPAs need to apply in order to be included. The policies for MSW waste management are common throughout Bangladesh, and hence to that effect, all the national policies have been considered in selecting the boundary of the PoA.

This was confirmed to DNV as part of the discussion of applicable regulation conducted with the host country's DNA /47/. The spatial boundaries of the first CPA requesting inclusion can be clearly identified.

The description of the programme of activities was verified on site through interviews with the CME /47//48//49/. DNV considers the PoA description of the PoA contained in the PoA-DD to be complete and accurate. The PoA-DD complies with the relevant forms and guidance for completing the CDM-SSC-PoA.

The assessment of no debundling is elaborated in section 4.7 of "Eligibility criteria for including CPAs to the PoA" of this report.

4.5 Demonstration of additionality for PoA

The implementation of the PoA does not take place as the result of mandatory regulation in the host country and is therefore voluntary. This was confirmed on site through an interview with the local DNA /47//48//49/. Demonstration of additionality of each generic CPA is detailed in the subsequent section 4.6 of this report.

4.6 Demonstration of additionality of each generic CPA

The project participant demonstrates the additionality of the generic CPA based on the Guidelines on the demonstration of additionality of microscale project activities (version 05.0) /30/. It concludes that the generic CPA is automatically additional because the CPA will aim to achieve emission reductions at a scale of no more than 20 ktCO₂e per year and the project activity is located in Bangladesh, a LDC country.

The demonstration of additionality of typical CPAs to be included to the PoA is in accordance with section A of the "Standard for demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities" /21/, and it is demonstrated that in the absence of CDM, none of the CPAs would occur /1/.

The following eligibility criteria 6 (refer to section 4.7 for the complete list of eligibility criteria) ensure that a CPA meets the conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as described above.

Eligibility criterion 6 specifies that each CPA must be able to demonstrate the project's additionality as specified in section 3.1 of the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme



of activities /21/. Additionality test to be met by each individual CPA is the demonstration that the CPA is an aerobic composting plant according to the applicability criteria listed in the latest version of AMS-III.F /23/ and therefore a type III project together with documentation that the CPA is a micro scale project activity. The demonstration shall include calculation of annual *ex-ante* emission reductions for each year of the crediting period demonstrating that the CPA will remain within the micro scale threshold for being a micro scale project activity in each year of the period, and thus include documentation that the project activity will aim to achieve emission reductions at a scale of no more than 20 ktCO₂e per year in each year of the crediting period.

4.7 Eligibility criteria for including CPAs to the PoA

The eligibility criteria for including CPAs are in accordance with section B of the “Standard for demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities” /21/. The eligibility criteria for inclusion of a SSC-CPA in the PoA are validated as follows:

- Eligibility criterion ‘a’ specifies that the entire boundary of the CPA project activity must be physically located within the territory of the Bangladesh. Therefore, it is concluded that the geographical boundary of the CPA has been specified and paragraph 16(a) of the demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/ has been complied with.
- Eligibility criterion ‘b’ specifies that to avoid double counting of emission reductions, each CPA must provide specific geographic GPS coordinates for the CPA to enable unique identification of the project. Also as per the PoA-DD /1/, each CPA Operator under this PoA will provide a declaration that “*this project activity will not lead to double counting of Emission Reduction by confirming that this project activity shall not be a part of any of the below mentioned category post approval of the project activity under CDM: (1) Standalone CDM project activity, (2) Bundled CDM project activity, (3) Another registered PoA*”. There is an declaration from the project participant with respect to this for CPA 01/14/. Therefore, it is concluded that conditions to avoid double counting of emission reductions have been specified and paragraph 16(b) of the standard for the demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/ has been complied with.
- Eligibility criterion ‘c’ specifies the technology applied in the CPA under this PoA. The applied technology / measue used in CPAs under the PoA is aerobic composting of municipal solid waste, where the compost is sold on the open market for use as fertiliser. Therefore, it is concluded that paragraph 16(c) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/ has been complied with.
- Eligibility criterion ‘d’ specifies that each CPA owner must be able to provide documentary evidence to verify the start date of the CPA. Signing date of the Agreement between the Department of Environment and the contractor for construction /15/. Therefore, it is concluded that conditions to check the start date of the CPA through documentary evidence have been specified and this meets the requirements of paragraph 16(d) of the standard for the demonstration of additionality,



development of eligibility criteria and application of multiple methodologies for programme of activities /21/.

- Eligibility criterion ‘e’ specifies that each CPA must meet the requirements of the approved methodology AMS-III.F version 11 /23/, including its relevant tools /24//25//26//27/ and guidelines /30//28/. The compliance of each CPA to the requirements of the approved methodology AMS-III.F version 11 /23/ is demonstrated as follows:
 - *This methodology comprises measures to avoid the emissions of methane to the atmosphere from biomass or other organic matter that would have otherwise been left to decay anaerobically in a solid waste disposal site (SWDS), or in animal waste management system (AMWS), or in a wastewater treatment system (WWTS). In the project activity, controlled aerobic treatment by composting of biomass is introduced* - The CPAs to be implemented under this PoA will involve controlled aerobic treatment of the biomass fraction of MSW that would otherwise have been left to decay anaerobically in a SWDS, by composting of MSW. Emission reductions derive from the avoidance of methane formation from decay of MSW in landfills.
 - *The project activity does not recover or combust landfill gas from the disposal site (unlike AMS-III.G “Landfill methane recovery”), and does not undertake controlled combustion of the waste that is not treated biologically in a first step (unlike AMS-III.E “Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment”). Project activities that recover biogas from wastewater treatment shall use methodology AMS-III.H “Methane recovery in wastewater treatment”. Project activities involving co-digestion of organic matters shall apply methodology AMS-III.AO “Methane recovery through controlled anaerobic digestion”* - The project participant has stated that the PoA excludes CPAs that involve recovering or combustion of landfill gas from the disposal site or controlled combustion of the waste that is not treated biologically.
 - *Measures are limited to those that result in emission reductions of less than or equal to 60 ktCO₂ equivalent annually* - The project participant has stated that CPAs under this PoA will aim at annual emission reduction of no more than 20 000 tons CO₂e in each year of the crediting period. Compliance with this criterion is checked by reviewing design documents related to the project and the estimated emission reduction calculations provided at the time of inclusion.
 - *This methodology is applicable to the composting of the organic fraction of municipal solid waste and biomass waste from agricultural or agro-industrial activities including manure* - The project participant has stated that CPAs under this PoA shall be aiming at aerobic composting of the organic fraction of MSW that would otherwise be left to decay in a SWDS.
 - *This methodology includes construction and expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For project activities that increase capacity utilization at existing facilities, project participant(s) shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate*



CDM project activity. The special efforts should be identified and described – The project participant has stated that this PoA includes CPAs undertaking construction and/or expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For CPAs that increase capacity utilization at existing facilities, CPAs shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate CDM project activity. The special efforts should be identified and described by the CPA before inclusion in the PoA.

- *This methodology is also applicable for co-composting wastewater and solid biomass waste, where wastewater would otherwise have been treated in an anaerobic wastewater treatment system without biogas recovery. The wastewater in the project scenario is used as a source of moisture and/or nutrients to the biological treatment process e.g. composting of empty fruit bunches (EFB), a residue from palm oil production, with the addition of palm oil mill effluent (POME) which is the wastewater co-produced from palm oil production -* The project participant has stated that CPAs under this PoA are limited to project activities undertaking aerobic composting of MSW and no co-composting is involved.
- *In case of co-composting, if it cannot be demonstrated that the organic matter would otherwise have been left to decay anaerobically, baseline emissions related to such organic matter shall be accounted for as zero, whereas project emissions shall be calculated according to the procedures presented in this methodology for all co-composted substrates -* The project participant has stated that CPAs under this PoA are limited to project activities undertaking aerobic composting of MSW and no co-composting is involved.
- *The location and characteristics of the disposal site of the biomass, animal manure and co-composting wastewater in the baseline condition shall be known, in such a way as to allow the estimation of its methane emissions, using the provisions of AMS-III.G, AMS-III.E (concerning stockpile), AMS-III.D “Methane recovery in animal manure management systems” or AMS-III.H respectively. Project activities for composting of animal manure shall also meet the requirements under paragraphs 1, and 2 (c) of AMS-III.D. Further no bedding material is used in the animal barns or intentionally added to the manure stream in the baseline. Blending materials may be added in the project scenario to increase the efficiency of the composting process (e.g. to achieve a desirable C/N ratio or free air space value), however, only monitored quantity of solid waste or manure or wastewater diverted from the baseline treatment system is used for emission reduction calculation. The following requirements will be checked ex ante at the beginning of each crediting period: a) Establish that identified landfill(s)/stockpile(s) can be expected to accommodate the waste to be used for the project activity for the duration of the crediting period; or b) Establish that it is common practice in the region to dispose of the waste in solid waste disposal site (landfill)/stockpile(s) -* The location and characteristics of the disposal site for MSW composted under this PoA will be indicated in each CPA with information of the amount of waste received at the landfill as well as documentation of the depth of the landfill and every other



information needed to estimate the MCF and estimate its methane emissions according to the provisions of AMS-III.F. In accordance with the eligibility criteria of the PoA it has been established ex-ante at the beginning of the crediting period that it is common practice in the region to dispose of the waste in landfills. National 3R strategy /36/ and the report from the Asian development bank /40/ has been referred which demonstrates landfilling is the common practice in Bangladesh.

- *The project participants shall clearly define the geographical boundary of the region referred in paragraph 8 (b), and document it in the CDM-PDD. In defining the geographical boundary of the region, project participants should take into account the source of the waste i.e. if waste is transported up to 50 km, the region may cover a radius of 50 km around the project activity. In addition, it should also consider the distance to which the final product after composting will be transported. In either case, the region should cover a reasonable radius around the project activity that can be justified with reference to the project circumstances but in no case it shall be more than 200 km. Once defined, the region should not be changed during the crediting period(s) - Each CPA will be required to clearly define the geographical boundary of the region in the CPA-DD with a radius of not more than 200 km. A criterion has been set for the compost producers in this regard by the project participant /42/.*
- *In case produced compost is handled aerobically and submitted to soil application, the proper conditions and procedures (not resulting in methane emissions) must be ensured - The project participant has specified that for each CPA to make provisions for soil application of the compost to ensure that the compost is stored and applied in a manner that does not lead to anaerobic conditions.*
- *In case produced compost is treated thermally/mechanically, the provisions in AMS-III.E related to thermal/mechanical treatment shall be applied - The compost is not expected to be treated thermally/mechanically, but if so the CPA will be obliged to follow the applicable provisions of AMS-III.E.*
- *In case produced compost is stored under anaerobic conditions and/or delivered to a landfill, emissions from the residual organic content shall to be taken into account and calculated as per the latest version of the Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site - The project participant has specified that the project activity aims at selling all compost produced to local farmers. The monitoring plan includes monitoring of the produced/sold compost.*

Therefore, it is concluded that conditions to ensure compliance with the applicability and other requirements of the approved methodology have been specified. This meets the requirement of paragraph 16(e) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/. Compliance with this criterion is checked by reviewing project documents prior to inclusion.

- Eligibility criterion ‘f’ specifies that each CPA must be able to demonstrate the project’s additionality as specified in section 3.1 of the Standard for demonstration of



additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/. Additionality test to be met by each individual CPA is the demonstration that the CPA is an aerobic composting plant according to the applicability criteria listed in the latest version of AMS-III.F and therefore a type III project together with documentation that the CPA is a micro scale project activity. The demonstration shall include calculation of annual *ex-ante* emission reductions for each year of the crediting period demonstrating that the CPA will remain within the micro scale threshold for being a micro scale project activity in each year of the period, and thus include documentation that the project activity will aim to achieve emission reductions at a scale of no more than 20 ktCO₂e per year in each year of the crediting period. Therefore, it is concluded that paragraph 16(f) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/ has been complied with

- Eligibility criterion ‘g’ specifies that each CPA must provide a copy of the approved Environmental Impact Analysis (EIA) and conduct stakeholders consultation. Therefore, it is concluded that conditions related to the undertaking of the environmental impact analysis (EIA) and stakeholders consultation have been specified and this meets the requirement of paragraph 16(g) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/. Compliance with this requirement is checked by reviewing the EIA submitted prior to inclusion /43/.
- Eligibility criterion ‘h’ specifies that each CPA must certify in writing whether any Development Aid or Assistance funds have been used for funding the construction and operation of the Project Activity which forms the PoA. This is in accordance to paragraph 16(h) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/. Compliance with this criterion is checked by reviewing sources of funding of the project /5/ and interviewing project personnel /47//48/ .
- Eligibility criterion ‘k’ specifies that each CPA shall not reduce more than 20 ktCO₂e annually. This is one of criteria also to be considered for demonstrating additionality of a CPA under this PoA.
- Eligibility criterion ‘l’ specifies that each CPA must not be a debundled component of a large scale activity. Therefore, it is concluded that the requirements for debundling check have been stated and these requirements are in accordance with the Guidelines on assessment of debundling for SSC project activities. The requirements of paragraph 16(l) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/ have been met. Compliance with this criterion is checked by reviewing project documents during desk review and confirmed through site visit if necessary.
- Eligibility criterion ‘m’ specifies that the CME has the competencies to check the features of potential CPAs in order to ensure that each CPA meets all requirements and eligibility criterion before submission to a DOE of a request for inclusion of the CPA in the PoA.



- Eligibility criterion ‘n’ specifies on the expansion of CPAs - This PoA includes CPAs undertaking construction and/or expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For CPAs that increase capacity utilization at existing facilities, CPAs shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate CDM project activity. The special efforts should be identified and described by the CPA before inclusion in the PoA.

Paragraphs 16(i) and 16(j) of the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities /21/ are related to target group & sampling requirement and thus criteria ‘i’ and ‘j’ as indicated in the PoA-DD are not applicable to the PoA.

4.8 Application of methodologies

The PoA applies methodology AMS-III.F version 11 /23/, which is the most recent valid version at the time of validation. The inclusion criteria selected by the CME will ensure all CPAs apply this methodology and version 11.

4.9 Management system of the PoA

The roles and responsibilities are indicated in section C of the PoA-DD and in the monitoring plan /1/.

The CME (Department of Environment (DoE) under the Ministry of Environment and Forests, Government of Bangladesh) will be responsible for the overall management of the PoA and will make the final decision on the eligibility of CPAs for inclusion in the PoA. CPA implementers will be responsible for managing individual CPAs and to ensure they maintain their eligibility to be part of the PoA.

Arrangements for training and capacity development are described in the PoA-DD /1/, and training will focus on data recording and monitoring procedures. The request for inclusion by each CPA will undergo a technical review performed by the CME. Double counting will be avoided by means of unique identification numbers for each CPA included under the PoA. Finally, annual reviews of the overall PoA management system will be carried out by the project participants and the CPA implementers to continuously improve the PoA management system.

The management system was discussed by DNV with the CME during the site visit /47/ and is considered feasible within the project design.

The management system of the proposed PoA is in accordance with the “Standard for demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities” /21/.

4.10 Environmental impacts

The environmental impacts are assessed at CPA level /43/.

4.11 Local stakeholder consultation

The local stakeholder consultation is assessed at CPA level /12//13/.



4.12 Application of selected baseline and monitoring methodology(ies) by each generic CPA

The assessment of the generic CPA's compliance with the applicability criteria of AMS-III.F (version 11) /23/ are documented in detail in section B.2 of Table 2 in the validation protocol in Appendix A to this report:

The following eligibility criteria (refer to section 4.7 for the complete list of eligibility criteria) ensure that a CPA meets the conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as described above.

Eligibility criterion 5 specifies that each CPA must meet the requirements of the approved methodology AMS-III.F version 11 /23/, including its relevant tools and guidelines. The compliance of each CPA to the requirements of the approved methodology AMS-III.F version 11 is demonstrated as follows:

- *This methodology comprises measures to avoid the emissions of methane to the atmosphere from biomass or other organic matter that would have otherwise been left to decay anaerobically in a solid waste disposal site (SWDS), or in animal waste management system (AMWS), or in a wastewater treatment system (WWTS). In the project activity, controlled aerobic treatment by composting of biomass is introduced -* The CPAs to be implemented under this PoA will involve controlled aerobic treatment of the biomass fraction of MSW that would otherwise have been left to decay anaerobically in a SWDS by composting of MSW. Emission reductions derive from the avoidance of methane formation from decay of MSW in landfills.
- *The project activity does not recover or combust landfill gas from the disposal site (unlike AMS-III.G "Landfill methane recovery"), and does not undertake controlled combustion of the waste that is not treated biologically in a first step (unlike AMS-III.E "Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment"). Project activities that recover biogas from wastewater treatment shall use methodology AMS-III.H "Methane recovery in wastewater treatment". Project activities involving co-digestion of organic matters shall apply methodology AMS-III.AO "Methane recovery through controlled anaerobic digestion" -* The project participant has stated that the PoA excludes CPAs that involve recovering or combustion of landfill gas from the disposal site or controlled combustion of the waste that is not treated biologically.
- *Measures are limited to those that result in emission reductions of less than or equal to 60 ktCO₂ equivalent annually -* The project participant has stated that CPAs under this PoA will aim at annual emission reduction of no more than 20 000 tons CO₂e in each year of the crediting period. Compliance with this criterion is checked by reviewing design documents related to the project and the estimated emission reduction calculations provided at the time of inclusion.
- *This methodology is applicable to the composting of the organic fraction of municipal solid waste and biomass waste from agricultural or agro-industrial activities including manure -* The project participant has stated that CPAs under this PoA shall be aiming at aerobic composting of the organic fraction of MSW that would otherwise be left to decay in a SWDS.
- *This methodology includes construction and expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For project activities*



that increase capacity utilization at existing facilities, project participant(s) shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate CDM project activity. The special efforts should be identified and described – The project participant has stated that this PoA includes CPAs undertaking construction and/or expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For CPAs that increase capacity utilization at existing facilities, CPAs shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate CDM project activity. The special efforts should be identified and described by the CPA before inclusion in the PoA.

- *This methodology is also applicable for co-composting wastewater and solid biomass waste, where wastewater would otherwise have been treated in an anaerobic wastewater treatment system without biogas recovery. The wastewater in the project scenario is used as a source of moisture and/or nutrients to the biological treatment process e.g. composting of empty fruit bunches (EFB), a residue from palm oil production, with the addition of palm oil mill effluent (POME) which is the wastewater co-produced from palm oil production -* The project participant has stated that CPAs under this PoA are limited to project activities undertaking aerobic composting of MSW and no co-composting is involved.
- *In case of co-composting, if it cannot be demonstrated that the organic matter would otherwise been left to decay anaerobically, baseline emissions related to such organic matter shall be accounted for as zero, whereas project emissions shall be calculated according to the procedures presented in this methodology for all co-composted substrates -* The project participant has stated that CPAs under this PoA are limited to project activities undertaking aerobic composting of MSW and no co-composting is involved.
- *The location and characteristics of the disposal site of the biomass, animal manure and co-composting wastewater in the baseline condition shall be known, in such a way as to allow the estimation of its methane emissions, using the provisions of AMS-III.G, AMS-III.E (concerning stockpile), AMS-III.D “Methane recovery in animal manure management systems” or AMS-III.H respectively. Project activities for composting of animal manure shall also meet the requirements under paragraphs 1, and 2 (c) of AMS-III.D. Further no bedding material is used in the animal barns or intentionally added to the manure stream in the baseline. Blending materials may be added in the project scenario to increase the efficiency of the composting process (e.g. to achieve a desirable C/N ratio or free air space value), however, only monitored quantity of solid waste or manure or wastewater diverted from the baseline treatment system is used for emission reduction calculation. The following requirements will be checked ex ante at the beginning of each crediting period: a) Establish that identified landfill(s)/stockpile(s) can be expected to accommodate the waste to be used for the project activity for the duration of the crediting period; or b) Establish that it is common practice in the region to dispose off the waste in solid waste disposal site (landfill)/stockpile(s) -* The location and characteristics of the disposal site for MSW composted under this PoA will be indicated in each CPA with information of the amount of waste received at the landfill



as well as documentation of the depth of the landfill and every other information needed to estimate the MCF and estimate its methane emissions according to the provisions of AMS-III.F. In accordance with the eligibility criteria of the PoA it has been established ex-ante at the beginning of the crediting period that it is common practice in the region to dispose of the waste in landfills. National 3R strategy has been referred which demonstrates landfilling is the common practice in Bangladesh.

- *The project participants shall clearly define the geographical boundary of the region referred in paragraph 8 (b), and document it in the CDM-PDD. In defining the geographical boundary of the region, project participants should take into account the source of the waste i.e. if waste is transported up to 50 km, the region may cover a radius of 50 km around the project activity. In addition, it should also consider the distance to which the final product after composting will be transported. In either case, the region should cover a reasonable radius around the project activity that can be justified with reference to the project circumstances but in no case it shall be more than 200 km. Once defined, the region should not be changed during the crediting period(s) - Each CPA will be required to clearly define the geographical boundary of the region in the CPA-DD with a radius of not more than 200 km. A criterion has been set for the compost producers in this regard by the project participant /42/.*
- *In case produced compost is handled aerobically and submitted to soil application, the proper conditions and procedures (not resulting in methane emissions) must be ensured - The project participant has specified that for each CPA to make provisions for soil application of the compost to ensure that the compost is stored and applied in a manner that does not lead to anaerobic conditions.*
- *In case produced compost is treated thermally/mechanically, the provisions in AMS-III.E related to thermal/mechanical treatment shall be applied - The compost is not expected to be treated thermally/mechanically, but if so the CPA will be obliged to follow the applicable provisions of AMS-III.E.*
- *In case produced compost is stored under anaerobic conditions and/or delivered to a landfill, emissions from the residual organic content shall to be taken into account and calculated as per the latest version of the Tool to determine methane emissions avoided from disposal of waste at a solid waste disposal site - The project participant has specified that the project activity aims at selling all compost produced to local farmers. The monitoring plan includes monitoring of the produced/sold compost.*

Therefore, it is concluded that conditions to ensure compliance with the applicability and other requirements of the approved methodology /23/ have been specified.

4.13 Project boundary of each generic CPA

The generic CPA-DD indicates that the project boundary consists of each individual MSW site, composting plant and sale of the compost. The project boundary complies with the requirements of the methodology.

The GHG sources identified (baseline) for the CPA are CH₄ emissions from decomposition of waste at the landfill site. Although the GHG gases to be included in the project boundary are not indicated by the methodology, the selected sources are reasonable based on the project design and as per the site visit observations for the CPA under validation. The system boundaries of the generic CPA comply with the system boundaries stipulated by the



methodology. The CPA does not involve other emissions sources (as per the site visit observations) not foreseen by the methodology that may question the applicability of the methodology.

	GHGs involved	Description
Baseline emissions	CH ₄	Emissions from decomposition of waste at the landfill site
Project emissions	CO ₂	On-site fossil fuel consumption due to the project activity other than for electricity generation
	CO ₂	Emissions from on-site electricity use
	CH ₄ and N ₂ O	Direct emissions from the waste treatment processes
Leakage	--	No leakage considered.

The identified boundary and selected sources and gases are justified for the generic CPA. The validation of the generic CPA did not reveal other greenhouse gas emissions occurring within the proposed CPA boundary as a result of the implementation of the proposed CPA which are expected to contribute more than 1% of the overall expected average annual emission reduction, which are not addressed by AMS-III.F (version 11) /23/.

4.14 Baseline scenario identification and description for each generic CPA

The approved baseline methodology /23/ has been correctly applied for the proposed project activity and the identified baseline scenario most reasonably represents what would occur in the absence of the proposed PoA.

In accordance with the applied methodology AMS-III.F, the baseline scenario is the situation where, in the absence of the project activity, biomass is left to decay within the project boundary and methane is emitted to the atmosphere /23/.

All the assumption and data used by the project participants are listed in the PoA-DD and/or supporting documents. All documentation relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD /1/. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence /40/ and can be deemed reasonable. Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD /1/.

4.15 Algorithms and/or formulae used to determine emission reductions of each generic CPA

4.15.1 Explanation of methodological choices

Emission reductions are calculated by CPAs as per the applied methodology AMS-III.F, version 11 /23/.

Baseline emissions:



$$BE_y = BE_{CH_4,SWDS,y} + BE_{ww,y} + BE_{CH_4,manure,y} - MD_{y,reg} * GWP_{CH_4}$$

Where:

$BE_{CH_4,SWDS,y}$	Yearly methane generation potential of the solid waste composted by the project activity during the years x from the beginning of the project activity ($x=1$) up to the year y estimated as per the latest version of the methodological tool “Emissions from solid waste disposal sites” (tCO _{2e}). The tool may be used with the factor “ $f=0.1$ ” taking into account the methane oxidation effect by the upper layer of the landfill. With the definition of year x as ‘the year since the project activity started diverting wastes from landfill disposal, x runs from the first year of crediting period ($x=1$) to the year for which emissions are calculated ($x=y$)’
$MD_{y,reg}$	Amount of methane that would have to be captured and combusted in the year y to comply with the prevailing regulations (tonne)
$BE_{CH_4,manure,y}$	Where applicable, baseline emissions from manure composted by the project activities, as per the procedures in AMS-III.D
$BE_{ww,y}$	Where applicable, baseline emissions from the wastewater co-composted, calculated as per the procedures in AMS-III.H
GWP_{CH_4}	GWP for CH_4 (value of 25 is used, as the emission reduction from the project activity will happen only after 1 January 2013, II commitment period GWP value is used /32/)

CPAs under this PoA will, in accordance with the eligibility criteria, be limited to composting facilities that do not treat either manure or wastewater.

Hence $BE_y = BE_{CH_4,SWDS,y}$

$BE_{CH_4,SWDS,y}$ will be calculated according to the methodological tool “Emissions from solid waste disposal sites” /24/ using formula (1). In this PoA the yearly model for calculating baseline emissions is used:

$$BE_{CH_4,SWDS,y} = \varphi \cdot (1 - f_y) \cdot GWP_{CH_4} \cdot (1 - OX) \cdot \frac{16}{12} \cdot F \cdot DOC_{f,y} \cdot MCF_y \cdot \sum_{x=1}^y \sum_j W_{j,x} \cdot DOC_j \cdot e^{-k_j(y-x)} \cdot (1 - e^{-k_j})$$

Where:

$BE_{CH_4,SWDS,y}$	=	Baseline, methane emissions occurring in year y generated from waste disposal at a SWDS during a time period ending in year y (t CO _{2e} / yr)
φ	=	Model correction factor to account for model uncertainties for year y
f_y	=	Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in the year y
GWP_{CH_4}		Global Warming Potential of methane
OX		Oxidation factor (reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste)
F		Fraction of methane in the SWDS gas (volume fraction)



PoA VALIDATION REPORT

x	Years in the time period in which waste is disposed at the SWDS, extending from the first year in the time period ($x = 1$) to year y ($x = y$).
y	Year of the crediting period for which methane emissions are calculated (y is a consecutive period of 12 months)
$DOC_{f,y}$	Fraction of degradable organic carbon (DOC) that decomposes under the specific conditions occurring in the SWDS for year y (weight fraction)
MCF_y	Methane correction factor for year y
$W_{j,x}$	Amount of solid waste type j disposed or prevented from disposal in the SWDS in the year x (t)
DOC_j	Fraction of degradable organic carbon in the waste type j (weight fraction)
k_j	Decay rate for the waste type j (1/yr)
j	Type of residual waste or type of waste in the MSW

Project Emission:

Project emission for the CPAs under this PoA is accounted for emissions from

a. Electricity consumption

$$PE_{EC,y} = \sum_j EC_{PJ,j,y} * EF_{EL,j,y} * (1 + TDL_{j,y})$$

And, $EC_{PJ,comp,y} = Q_y * SEC_{comp,default}$

Where

Q_y - Quantity of waste composted in year y (t/yr).

$SEC_{comp,default}$ - Default value for the specific quantity of electricity consumed per tonne of waste composted (MWh/t). Default value of 0.01 for $SEC_{comp,default}$ from the tool of "Project and leakage emissions from composting" /26/ has been used.

$EF_{EL,j,y}$ - Emission factor for electricity generation for source j in year y (tCO₂/MWh). A value of 1.3 has been used as emission factor for electricity generation under Scenario A as per the methodological tool "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" /25/.

$TDL_{j,y}$ - Average technical transmission and distribution losses for providing electricity to source j in year y . Determination of $TDL_{j,y}$ uses the default value of 20% provided by the methodological tool to calculate baseline, project and/or leakage emissions /25/ from electricity production (version 01) as applicable for electricity consumption sources from project activities falling under Scenario A.

b. Fossil fuel consumption

$$PE_{FC,y} = Q_y * EF_{FC,default}$$

Where

$EF_{FC,default}$ - Default emission factor (0.0207 t CO₂/t) for fossil fuels consumed by the composting activity per tonne of waste (t), as per option 2 in the step "Determination of project emissions from fossil fuel consumption ($PE_{FC,y}$)".

c. Methane

$$PE_{CH_4,y} = Q_y * EF_{CH_4,y} * GWP_{CH_4}$$

Where:



- $PE_{CH_4,y}$ = Project emissions of methane from the composting process in year y (tCO₂e/yr)
 Q_y = Quantity of waste composted in year y (t/yr)
 $EF_{CH_4,y}$ = Emission factor of methane per tonne of waste composted valid for year y (tCH₄ /t). A default value for $EF_{CH_4,y} = EF_{CH_4,default}$ of 0.002 t CH₄/t waste has been used as per option 2 of the tool “Project and leakage emissions from composting” /26/
 GWP_{CH_4} = Global Warming Potential of CH₄ (tCO₂/tCH₄). The default value of 25 for the second commitment period has been used.

d. Nitrous oxide

$$PE_{N_2O,y} = Q_y * EF_{N_2O,y} * GWP_{N_2O}$$

Where:

- $PE_{N_2O,y}$ = Project emissions of nitrous oxide from composting in year y (tCO₂e/yr).
 Q_y = Quantity of waste composted in year y (t/yr)
 $EF_{N_2O,y}$ = Emission factor of nitrous oxide per tonne of waste composted valid for year y (tN₂O/t). A default value for $EF_{N_2O,y} = EF_{N_2O,default}$ of 0.0002 t N₂O/t waste has been used as per option 2 of the tool “Project and leakage emissions from composting”
 GWP_{N_2O} = Global Warming Potential of N₂O (tCO₂e/t N₂O). The default value of 298 for the second commitment period has been used/32/.

Leakage:

CPA under this PoA are, according to the eligibility criteria, obligated to undergo training in the proper handling of compost in order to avoid methane formation. This training will involve both considerations of the correct application of compost when used as a fertilizer, as well as the correct storage (aerobic) and avoidance of disposal in a SWDS unless used as a top-layer material.

Leakage emissions are therefore estimated to be zero.

4.15.2 Parameters determined ex-ante

Following parameters are determined ex-ante by each CPA, and will be used for the duration of the CPA crediting period:

1. $\phi_{default}$ - Default value for the model correction factor to account for model uncertainties: All CPAs will use a value of 1 for project or leakage emissions and 0.85 for baseline emissions. The values are sourced from tool to calculate “Emissions from solid waste disposal sites” /24/.
2. OX - Oxidation factor (reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste): All CPAs will use a value of 0.1 , which is the default value indicated by the methodology. The value is sourced from IPCC 2006 Guidelines for National Greenhouse Gas Inventories /31/.
3. F - Fraction of methane in the SWDS gas (volume fraction): A value of 0.5 will be used in all CPAs. The value is sourced from IPCC 2006 Guidelines for National Greenhouse Gas Inventories /31/.



4. $DOC_{f, default}$ - Default value for the fraction of degradable organic carbon (DOC) in MSW that decomposes in the SWDS (weight fraction): A value of 0.5 will be used in all CPAs. The value is sourced from IPCC 2006 Guidelines for National Greenhouse Gas Inventories /31/.
5. $MCF_{default}$ - Methane correction factor: A value of 0.5 will be used in all CPAs. The value is sourced from IPCC 2006 Guidelines for National Greenhouse Gas Inventories for unmanaged solid waste disposal sites with depth greater than or equal to 5 meters. For CPA 01, layout of the existing landfill showing the depth of the landfill as greater than or equal to 5 meters has been submitted to DNV /10/.
6. DOC_j - Fraction of degradable organic carbon in the waste type j (weight fraction), Default values for wet waste suggested in IPCC 2006 Guidelines for National Greenhouse Gas Inventories” as recommended by the tool /24/ .
7. k_j - Decay rate for the waste type j (1/year): all CPAs will use a values as per the climate condition of Bangladesh /46/sourced from the tool for emissions from solid waste disposal site /24/ , .
8. GWP_{CH_4} - Global Warming Potential of methane (tCO_2e/tCH_4): A value of 25 has been used, sourced from the UNFCCC website/32/.
9. GWP_{N_2O} - Global Warming Potential of N_2O (tCO_2e/tN_2O): A value of 298 has been used, sourced from the UNFCCC website /32/.
10. $EF_{CH_4, default}$ - Default emission factor of methane per tonne of waste composted (wet basis) (tCH_4/t): A default value for $EF_{CH_4, y} = EF_{CH_4, default}$ of 0.002 t CH_4/t waste has been used as per option 2 of the tool “Project and leakage emissions from composting” /26/.
11. $EF_{N_2O, default}$ - Default emission factor of nitrous oxide per tonne of waste composted (wet basis) (tCH_4/t): A default value for $EF_{N_2O, y} = EF_{N_2O, default}$ of 0.0002 t N_2O/t waste has been used as per option 2 of the tool “Project and leakage emissions from composting” /26/.
12. $SEC_{comp, default}$ - Default value for the specific quantity of electricity consumed per tonne of waste composted(MWh/t). Default value of 0.01 for $SEC_{comp, default}$ from the tool of “Project and leakage emissions from composting” has been used /26/.
13. $EF_{FC, default}$ - Default emission factor (0.0207) for fossil fuels consumed by the composting activity per tonne of waste ($t CO_2/t$), as per option 2 in the step “Determination of project emissions from fossil fuel consumption ($PE_{FC, y}$)”.
14. $EF_{EL, j, y}$ - Emission factor for electricity generation for source j in year y (tCO_2/MWh). A value of 1.3 has been used as emission factor for electricity generation under Scenario A as per the methodological tool to calculate baseline, project and/or leakage emissions from electricity consumption /25/.
15. $TDL_{j, y}$ - Average technical transmission and distribution losses for providing electricity to source j in year y . Determination of $TD_{L, y}$ uses the default value of 20% provided by the methodological tool to calculate baseline, project and/or leakage emissions from electricity production (version 01) as applicable for electricity consumption sources from project activities falling under Scenario A /25/.

DNV confirms that the formulaes applied by the project activity are in compliance with the methodology & tools applied and are accurate and conservative. The baseline and project



emissions can be replicated using the data and the values stated in the CPA and have been verified by DNV.

4.16 Monitoring plan

The monitoring plan for typical CPA has been described in B.7.2 of PoA-DD /1/. The monitoring plan described in the PoA-DD complies with the methodology of AMS-III.F (version 11) /23/. DNV has verified all parameters in the monitoring plan against the relevant methodology requirements and found satisfied.

DNV has reviewed the monitoring procedure through the document review and interview with the relevant personnel. Monitoring points have been discussed with the PoA coordinating/managing entity and CPA implementer. These monitoring points include the monitoring methodology, data & record control, QA/QC procedures to calculate the emission reduction.

Thus, the monitoring plan has been appropriately established and the achieved emission reduction can be reported ex-post and verified.

The monitoring plan is in compliance with the monitoring methodology AMS-III.F, version 11 /23/.

4.16.1 Parameters monitored ex-post by each generic CPA

The following parameters will be monitored *ex-post* by CPAs.

1. Q_y - Amount of waste composted per year (tonne): Will be monitored using a weigh bridge, with accuracy of ± 5 kg. The data will be measured daily and aggregated monthly for ER calculations;
2. $p_{n,j,x}$ - Weight fraction of the waste type j in the sample n collected during year x : Will be done on quarterly basis;
3. $\text{Compost}_{\text{produced}}$ - Amount of produced compost (kg): will be measured using a mobile scale;
4. $\text{Compost}_{\text{sold}}$ - Amount of sold compost (kg): will be measured using a mobile scale.

The factor “ r ” for capacity expansion CPAs will be calculated from the monitored parameter of Q_y and “Registered annual amount of waste composted (tonnes) at the facility on a “business as usual” basis calculated as the highest amount of annual compost production in the last five years prior to the project implementation”, as per the methodology

The individual CPA will also document in a quality control program the operation of the composting plant including the parameters to be maintained to ensure aerobic conditions (e.g. temperature and moisture during different composting stages) and monitor the soil application of the compost in agriculture or related activities by a) documenting the sales or delivery of the compost final product and b) in situ verification of the proper soil application of the compost to ensure aerobic conditions for further decay.

4.16.2 Management system and quality assurance

The management system and quality assurance measures foreseen for the implementation of the programme are described in the PoA-DD /1/.

The frequency of reporting for different parameters is clearly indicated and in line with the requirements of the methodology. The responsibility and authority for registration, monitoring, measurement and reporting activities is described in section B.7.2 of the PoA-DD



/1/, where roles and responsibilities for all task related to the programme's planning and implementation are allocated to the different project participants and CPA implementers. Training of personnel is likewise described, as well as how training efforts will be recorded.

The management system in place covers all requirements set by the Standard for the demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities /21/ and allows monitored data to be verified.

- o0o -

APPENDIX A

POA AND GENERIC CPA VALIDATION PROTOCOL

Table 1 Mandatory requirements for CDM programme of activities (PoA)

Requirement	Reference	Conclusion
About Parties		
1. The programme shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3.	Kyoto Protocol Art.12.2	CL1 OK
2. The programme shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC.	Kyoto Protocol Art.12.2.	OK
3. The programme shall have the written approval of voluntary participation from the designated national authority of each Party involved.	Kyoto Protocol Art. 12.5a, CDM Modalities and Procedures §40a	OK
4. The programme shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof.	Kyoto Protocol Art. 12.2, CDM Modalities and Procedures §40a	OK
5. In case public funding from Parties included in Annex I is used for the programme, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, § 2	OK
6. Parties participating in the CDM shall designate a national authority for the CDM.	CDM Modalities and Procedures §29	OK
7. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol.	CDM Modalities §30/31a	OK
8. The participating Annex I Party's assigned amount shall have been calculated and recorded.	CDM Modalities and Procedures §31b	CL1 OK
9. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7.	CDM Modalities and Procedures §31b	CL1 OK
About Design of Programme		

Requirement	Reference	Conclusion
10. The CDM-POA-DD sets a framework for the implementation of the PoA and defines unambiguously a CPA under the PoA.	PoA Procedures § 6	OK
11. The coordinating/managing entity shall be identified.	PoA Procedures § 6 (a)	OK
12. 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 is defined.	PoA Procedures § 6 (b)	OK
13. Eligibility criteria are defined for inclusion of a project activity as a CPA under the PoA, which shall include criteria for demonstration of additionality, and the 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.	PoA Procedures § 6 (g)	CAR-4 OK
14. The length of the PoA is not exceeding 28 years.	PoA Procedures § 6 (h)	OK
15. The operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA is described, including a description of a record keeping system for each CPA under the PoA, 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 CDM project activity or as a CPA of another PoA, the provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA.	PoA Procedures § 6 (i)	OK
16. The proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of emission reductions achieved by CPAs under the PoA is described. In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA there is a transparent system defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.	PoA Procedures § 6 (k)	OK
About small-scale project activities (if applicable)		
17. The proposed project activity shall meet the eligibility criteria for small scale	Simplified Modalities and Procedures	OK

Requirement	Reference	Conclusion
CDM project activities set out in § 6 (c) of the Marrakech Accords and shall not be a debundled component of a larger project activity.	for Small Scale CDM Project Activities §12a,c	
18. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and use the simplified baseline and monitoring methodology for that project category.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	OK
19. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c	OK
About additionality		
20. Additionality of the programme as a whole is demonstrated because in the absence of the CDM (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.	Kyoto Protocol Art. 12.5c, CDM Modalities and Procedures §43 PoA Procedures § 6 (e)	OK
21. It is demonstrated for the PoA and generic CPA that in the absence of CDM, none of the implemented CPAs would occur	PoA Standard § 7	OK
22. Additionality of a typical CPA is demonstrated through eligibility criteria for inclusion in the PoA.	PoA Procedures § 7 (g)	OK
About application of baseline and monitoring methodology		
23. The baseline and monitoring methodology shall be previously approved by the CDM Executive Board.	CDM Modalities and Procedures §37e	OK
24. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	CDM Modalities and Procedures §45c,d	OK
25. The baseline methodology shall exclude to earn CERs for decreases in activity	CDM Modalities and Procedures §47	OK

Requirement	Reference	Conclusion
levels outside the project activity or due to force majeure.		
26. The monitoring plan for a typical CPA is developed in accordance with the approved monitoring methodology, and identification of the monitoring provisions and data parameters a CPA has is to apply/monitor	PoA Procedures § 6 (j)	OK
27. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP.	CDM Modalities and Procedures §37f	OK
About forecast emission reductions		
28. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change.	Kyoto Protocol Art. 12.5b	OK
About environmental impacts		
29. Documentation on the analysis of the environmental impacts of the programme activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the programme participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	CDM Modalities and Procedures §37c	<input type="checkbox"/> Analysis at PoA level <input checked="" type="checkbox"/> Analysis at CPA level
About stakeholder comments		
30. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received.	CDM Modalities and Procedures §37b	<input type="checkbox"/> Analysis at PoA level <input checked="" type="checkbox"/> Analysis at CPA level
31. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available.	CDM Modalities and Procedures §40	OK

Requirement	Reference	Conclusion
Other		
32. The project design document shall be in conformance with the CDM-PoA-DD format.	CDM Modalities and Procedures Appendix B, EB Decision	OK

Table 2 Requirements checklist

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
<i>PART I. Programme of activities (PoA)</i>					
A General description of project activity					
A.1 Title of the PoA (PS § 31, VVS § 62-63)					
A.1.1 Does section A.1 of the PoA-DD include a clearly identifiable project title, version number of the PoA-DD and date of the PoA-DD?	/1/	DR	<input checked="" type="checkbox"/> Clearly identifiable title of the project activity <input checked="" type="checkbox"/> Version number of the PoA-DD is included <input checked="" type="checkbox"/> Date of the PoA-DD is included. Though the date is mentioned in the webhosted PoA-DD (18 April 2014), typo error observed in the date of the webhosted PoA-DD, which was webhosted on 19 March 2014. May clarify the date of webhosted PoA-DD.	CL	OK
A.1.2 Is the PoA-DD is in accordance with the applicable requirements for completing PoA-DD?	/1/	DR	<input checked="" type="checkbox"/> Yes		OK
A.2 Description of the PoA (VVS § 64-69, (PS § 138, VVS § 189 and VVS § 150-157 for small-scale project activities, as applicable)					
A.2.1 How was the design of the PoA assessed?	/1/	DR	<i>What type is the generic CPA?</i> <input type="checkbox"/> Generic CPA in existing facility or utilizing existing equipment(s) <input type="checkbox"/> Generic CPA is either a large scale project or a small scale project with emission reductions exceeding 15 000 tCO ₂ e per year. In this case, a site visit must be performed. <input type="checkbox"/> Generic CPA is a bundled small scale		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>project, with each project in the bundle with emission reductions not exceeding 15,000 tCO₂e per year. In such case the number of physical site visits may be based on sampling, if the sampling size is appropriately justified through statistical analysis.</p> <p><input type="checkbox"/> The generic CPA is an individual small scale project activity with emission reductions not exceeding 15 000 tCO₂e per year. In this case, DOE may not conduct a physical site visit as appropriate.</p> <p><input type="checkbox"/> Greenfield project</p> <p>As per the applied methodology AMS-III.F, version 11, the project activity includes construction, expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. This is captured in section B.2 of the part II (PART II. Generic component project activity (CPA)) of the PoA DD.</p> <p><i>How was the design of the first CPA submitted with the PoA assessed?</i></p> <p><input checked="" type="checkbox"/> Physical site inspection</p> <p><input checked="" type="checkbox"/> Reviewing available designs and feasibility studies</p> <p>First CPA (CPA 01) under this PoA is a greenfield project. At the time of the site visit, no construction work has started; Project participants are in the process of finalizing the civil work contractor.</p>		

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
A.2.2	If a greenfield project, describe the physical implementation of the project when the validation was commenced.	/1/	DR	As per the applied methodology AMS-III.F, version 11, the project activity includes construction, expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. This is captured in section B.2 of the part II (PART II. Generic component project activity (CPA)) of the PoA DD.		OK
A.2.3	If physical site visits were performed based on sampling (only applicable for bundled small scale projects, each with emission reductions not exceeding 15 000 tCO ₂ e per year), justify the sampling through a statistical analysis:	/1/	DR	The project is not a bundled small scale project, therefore this is not applicable.		OK
A.2.4	Does the PoA-DD and generic CPA-DD describe the framework for the implementation of the proposed CDM PoA and inclusion of CPAs under the PoA?	/1/	DR	As required by the VVS para 189 “ <i>The DOE shall assess the CDM-PoA-DD and the PoA-specific CDM-CPA-DD that is submitted by the coordinating/managing entity and shall confirm the framework developed for the implementation of the PoA, and defining a CPA under the PoA</i> ”, the framework for the implementation of the proposed CDM PoA and inclusion of CPAs under the PoA not provided in the webhosted PoA-DD.	CC=	OK
A.2.5	Does the PoA involve alteration of existing installations? If so, have the differences between pre-project and post-project activity been clearly described in the PoA-DD?	/1/	DR	As per the applied methodology AMS-III.F, version 11, the project activity includes construction (greenfield), expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. This is captured in section B.2 of the part II (PART II. Generic component project activity (CPA)) of the PoA DD.		OK
A.2.6	Does the PoA design engineering reflect current good practices?	/1/	DR	Yes, the PoA design engineering reflects current good practices.		OK
A.2.7	Would the technology result in a significantly better	/1/	DR	No transfer of technology involved in the project		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
	performance than any commonly used technologies in the host country? Is any transfer of technology from any Annex-I Party involved?			activity.		
A.2.8	Does the PoA qualify as a small scale CDM project activity as defined in paragraph 6(c) of decision 17/CP.7 on the modalities and procedures for the CDM?	/1/	DR	Yes, the PoA qualifies as a small scale CDM project activity		OK
A.2.9	Is the small scale project activity a debundled component of a larger project activity in accordance with the rules defined in appendix C of the simplified modalities and procedures for small-scale CDM project activities?	/1/	DR	No, the project activity is not a debundled component of a larger project activity		OK
A.3 Programme Boundaries (VVS § 191-192) <i>Programme Boundaries are the limits and borders defining the GHG emission reduction project.</i>						
A.3.1	Are the programme's spatial boundaries (geographical) clearly defined?	/1/	DR	Yes. The physical and geographical boundary of the PoA is the national borders of Bangladesh		OK
A.3.2	Are the programme's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	/1/	DR	Yes, programme's system boundaries (components and facilities used to mitigate GHGs) are clearly defined in the PDD.		OK
A.3.3	Do the programme boundaries take into consideration all applicable national and/or sectoral policies and regulations within the chosen boundary?	/1/	DR	Yes.		OK
A.3.4	Can each CPA under the PoA be clearly identified individually including spatial boundaries (geographical) clearly defined?	/1/	DR	Yes, each CPA under the PoA can be clearly identified using the global positioning system (GPS) method.		OK
A.4 Participation and authorization (VVS § 38-52) <i>Referring to Part A.3 and A.4, Appendix 1 and 2 of the PoA-DD as well as the CDM glossary with respect to the terms Party, Letter of Approval, Authorization and Project Participant.</i>						
A.4.1	Do all participating Parties fulfil the participation requirements as follows:	/1/	DR	The host party, Bangladesh fulfils the participation requirement. However the project participant to confirm involvement of any	CL-2	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
				Annex I Party in the project activity at the stage of validation.		
a) Party has ratified the Kyoto Protocol b) Party has designated a Designated National Authority c) The assigned amount has been determined		/1/				
A.4.2	Do the letters of approval meet the following requirements? a) LoA confirms that Party has ratified the Kyoto Protocol b) LoA confirms that participation is voluntary c) The LoA confirms that the project contributes to the sustainable development of the host country? d) The LoA refers to the precise project activity title e) The LoA is unconditional with respect to (a) to (d) above f) The LoA is issued by the respective Party's DNA g) The LoA was received directly by the DNA or the PP h) In case of doubt regarding the authenticity of the letter of approval, describe how it was verified that the letter of approval is authentic	/1/	DR	The host party, Bangladesh fulfils the participation requirement. However the project participant to confirm involvement of any Annex I Party in the project activity at the stage of validation.	CL-2	OK
A.4.3	Have all private/public project participants been authorized by an involved Party?	/1/	DR	Project participant to confirm involvement of any Annex I Party in the project activity at the stage of validation.	CL-2	OK
A.4.4	Has the coordinating/managing entity of the programme been identified?	/1/	DR	Yes. The Coordinating and Managing Entity of this PoA is the Department of Environment (DoE) under the Ministry of Environment and Forests, Bangladesh		OK
A.4.5	Has the coordinating/managing entity provided letters of authorization of its coordination of the PoA from each host Party?	/1/	DR	Project participant to confirm involvement of any Annex I Party in the project activity at the stage of validation.	CL-2	OK
A.5 Modalities of communications (VVS § 53-61)						
A.5.1	How has the corporate identity of all project participants and focal points included in the MoC, as well as the personal	/1/	DR	<input type="checkbox"/> Directly checking evidence for corporate, personal identity and other relevant	CAR-2	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
identities, including specimen signatures and employment status, of their authorized signatories, been validated?			<p>documentation;</p> <p><input type="checkbox"/> Notarized documentation;</p> <p><input type="checkbox"/> Written confirmation from the project participant or the coordinating/managing entity that submits to it the MoC statement that all corporate and personal details, including specimen signatures, are valid and accurate. If this case was selected, DNV has confirmed that:</p> <p><input type="checkbox"/> the MoC statement was received from a project participant with whom DNV has a contractual relationship.</p> <p><input type="checkbox"/> the official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant</p> <p>MoC not yet provided.</p>		
A.5.2 Has the MoC statement been correctly completed and duly authorized? Check that all three requirements listed in the next column are complied with.	/1/	DR	<p><input type="checkbox"/> The latest version of the form F-CDM-MOC has been used;</p> <p><input type="checkbox"/> The information required as per the F-CDM-MOC, including its annex 1, is correctly completed;</p> <p><input type="checkbox"/> The project participant's authorized signatories signing the F-CDM-MOC correspond to the project participant's authorized signatories included in F-CDM-</p>	CAR-2	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			MOC, annex 1. MoC not yet provided.		
A.6 Public funding of the project activity (CDM Modalities and Procedures Appendix B § 2)					
A.6.1 In case public funding from Parties included in Annex I is used for the project activity, have these Parties provided an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties?	/1/	DR	No public funding involved in the project activity as the project is funded by the Department of Environment (DoE) under the Ministry of Environment and Forests, Bangladesh.		OK
A.7 Verification of CPAs (PoA procedure § 6 k)					
A.7.1 If case the coordinating /managing entity does not wish to have all CPAs verified, is there a description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of reductions of anthropogenic emissions by sources or removals by sinks of greenhouse gases achieved by CPAs under the PoA?	/1/	DR	Not applicable, as each CPA under this PoA would be verified.		OK
B Demonstration of additionality and development of eligibility criteria					
B.1 Additionality of the Programme of Activities (VVS § 195) <i>Assessment of the additionality of the PoA as a whole in accordance with the PoA standard</i>					
B.1.1 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?	/1/	DR	Demonstration of additionality as required by the standard “Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities”, para 7 “ <i>Additionality shall be demonstrated by establishing that in the absence</i>	CAR-3	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<i>of CDM PoA, none of the implemented CPAs would occur</i> ” not seen in the PoA-DD.		
B.1.2 If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is being enforced? If it is enforced, has it been demonstrated that the programme will lead to a higher level of enforcement?	/1/	DR	No, though the government of Bangladesh is promoting 3R strategy, it is not mandatory to be followed by the local municipalities.		OK
B.2 Additionality determination of each generic CPA (VVS § 101-129 and VVS § 158-161 for small-scale project activities, as applicable)					
B.2.1 What approach/tool does the PoA use to demonstrate additionality of each generic CPA? Is this in line with the methodology? In case of small-scale CDM project activities, are the Guidelines on the demonstration of additionality of small-scale project activities applied considering also the “Non-binding best practice examples to demonstrate additionality for SSC project activities”.	/1/	DR	The PoA uses “Guideline - Demonstrating additionality of microscale project activities”, version 5.0 to demonstrate additionality of each CPA under this PoA. Yes , this is applicable for the project activity as per para 10 of the guideline which states - <i>Other project activities not included in paragraphs 8 or 9 above, that is Type III project activities that aim to achieve emission reductions at a scale of no more than 20 ktCO_{2e} per year, are additional if any one of the following conditions is satisfied</i> <i>a. The geographic location of the project activity is an LDC/SIDS or SUZ of the host country as identified by the government in accordance with the paragraph 8(a)(i) above;</i> <i>(b) The project activity is an emission reduction activity with both conditions (i) and (ii) below satisfied:</i> <i>(i) Each of the independent subsystems/measures in the project activity achieves an estimated annual emission reduction equal to or less than 600 tCO_{2e} per year; and</i>		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
				<p>(ii) End users of the subsystems or measures are households/communities/SMEs.</p> <p>Since the eligibility criteria set for each CPA to be included under this PoA to have ERs ≤ 20 ktCO₂e and the project boundary is the boundary of Bangladesh, a LDC, the CPAs to be included in this PoA are deemed additional.</p>		
B.2.2	Have the regulatory requirements correctly been taken into account to evaluate the project activity and the alternatives?	/1/	DR	As the project baseline has directly been sourced from the applied methodology, no further discussion on the alternatives deemed required.		OK
B.2.3	Is sufficient evidence provided to support the relevance of the arguments made?	/1/	DR	As the project baseline has directly been sourced from the applied methodology, no further discussion on the alternatives deemed required.		OK
B.2.4	What is the additionality of each generic CPA mainly based on (Investment analysis or barrier analysis)?	/1/	DR	The additionality of each generic CPA is based on “autoadditional” based on the para 10 (as explained above) of the “Guideline - Demonstrating additionality of microscale project activities”		OK
Investment analysis (VVS § 117-123) <i>The list of questions below must be adjusted to the parameters in the investment analysis relevant to the project under validation. <u>All</u> input parameters need to be assessed.</i>						
B.2.5	Does each generic CPA or any of the remaining alternatives generate revenues apart from CDM? Is this reflected in the PoA-DD?	/1/	DR	Not applicable as the additionality of each generic CPA is based on “autoadditional” based on the para 10 of the “Guideline - Demonstrating additionality of microscale project activities”		OK
Barrier analysis (VVS § 124-127)						
B.2.6	Are the barriers identified complimentary to a potential	/1/	DR	Not applicable as the additionality of each		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
investment analysis? Does the barrier have a clear impact on the financial returns so that it can be assessed in an investment analysis? Each barrier is discussed separately.				generic CPA is based on “autoadditional” based on the para 10 of the “Guideline - Demonstrating additionality of microscale project activities”		
Common practice analysis (VVS § 128-130)						
B.2.7	Does the project apply the latest version of the “Guidelines on common practice” (applicable to projects <i>Tool for the demonstration and assessment of additionality / Combined tool to identify the baseline scenario and demonstrate additionality</i> or any other methodology requiring the use of the “Guidelines on common practice”)?	/1/	DR	Not applicable as the additionality of each generic CPA is based on “autoadditional” based on the para 10 of the “Guideline - Demonstrating additionality of microscale project activities”		OK
Conclusion						
B.2.8	What is the conclusion with regard to the additionality of the project activity?	/1/	DR	The PoA uses “Guideline - Demonstrating additionality of microscale project activities”, version 5.0 to demonstrate additionality of each CPA under this PoA. Yes , this is applicable for the project activity as per para 10 of the guideline which states - <i>Other project activities not included in paragraphs 8 or 9 above, that is Type III project activities that aim to achieve emission reductions at a scale of no more than 20 ktCO₂e per year, are additional if any one of the following conditions is satisfied</i> <i>a. The geographic location of the project activity is an LDC/SIDS or SUZ of the host country as identified by the government in accordance with the paragraph 8(a)(i) above;</i> <i>(b) The project activity is an emission reduction activity with both conditions (i) and (ii) below satisfied:</i> <i>(i) Each of the independent subsystems/measures in the project activity achieves an estimated annual emission reduction equal to or less than</i>		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			<p>600 tCO₂e per year; and</p> <p>(ii) End users of the subsystems or measures are households/communities/SMEs.</p> <p>Since the eligibility criteria set for each CPA to be included under this PoA to have ERs ≤ 20 ktCO₂e and the project boundary is the boundary of Bangladesh, a LDC, the CPAs to be included in this PoA are deemed additional.</p>		
B.3 Eligibility Criteria (VVS § 196) <i>Eligibility criteria to assess eligibility of CPAs to be included to PoA.</i>					
B.3.1 Are the geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA?	/1/	DR	The geographical boundary of each CPA will be within the geographic boundaries of Bangladesh. This criterion is sufficient to ensure that the geographical boundary of the CPA is consistent with the geographical boundary of the PoA.		OK
B.3.2 Are there conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)?	/1/	DR	As per the PoA-DD “Double counting is avoided by the unique identification of each CPA using its coordinates in the Global Positioning System. Also the CPA Operator shall demonstrate that this project activity shall not lead to double counting of Emission Reduction by confirming that this project activity shall not be a part of any of the below mentioned category post approval of the project activity under CDM: (1) Standalone CDM project activity, (2) Bundled CDM project activity, (3) Another registered PoA”.		OK
B.3.3 Are there specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications?	/1/	DR	The technology/measure used in CPAs under the PoA is aerobic composting of municipal solid waste, where the compost is sold on the open market for use as fertilizer.	CAR-4	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
				However elaboration on the specifications of the technology including the type, capacity and other key features of the systems not seen in the PoA-DD.		
B.3.4	Are there conditions to check the start date of the CPA through documentary evidence?	/1/	DR	As per the PoA-DD – “The starting date of any CPA will be checked by introducing an opening procedure for the CPA with requirements to be in place”. However details on the opening procedure not clearly elaborated in the PoA-DD.	CAR-4	OK
B.3.5	Are there conditions that ensure compliance with applicability and other requirements of single or multiple methodology/ies applied by CPAs?	/1/	DR	Each CPA under this PoA will be in compliance with the applied methodology AMS-III.F and a the threshold of 20 ktCO ₂ e of emission reduction for type III small scale project		OK
B.3.6	Are there conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality, and are these in accordance with the requirements of the PoA Standard?	/1/	DR	Yes, the PoA uses “Guideline - Demonstrating additionality of microscale project activities”, to demonstrate additionality of each of the CPA and this is inline with para 8 of the “Standard - Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” version 3.0.		OK
B.3.7	Are there PoA-specific requirements stipulated by the CMEs including any conditions related to undertaking local stakeholder consultations and environmental impact analysis?	/1/	DR	Each CPA will hold a local stakeholder consultation and environmental impact analysis, present its results in a specific report and follow the requirements established by the carbon standards. This criterion clearly defines the conditions related to undertaking local stakeholder consultations and environmental impact analysis.		OK
B.3.8	Where applicable, are the target group (e.g.	/1/	DR	This criterion is not discussed in the PoA-DD.	CAR-4	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
	domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation) specified?					
B.3.9	Where applicable, are there conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys?	/1/	DR	Sampling details provided in the PoA-DD is not complete and it is not clear whether it is in line with the sampling guidelines.	CAR-4	OK
B.3.10	Where applicable, are there conditions that ensure that CPA in aggregate meets the small-scale or micro-scale threshold criteria and remain within those thresholds throughout the crediting period of the CPA?	/1/	DR	Yes, Each CPA under this PoA will be in compliance with the applied methodology AMS-III.F and a the threshold of 20 ktCO ₂ e of emission reduction for type III small scale project.		OK
B.3.11	Where applicable, are there requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories?	/1/	DR	The CPA shall in the CPA-DD demonstrate that the project activity is not a debundled component of large scale CDM project. In doing so, the CPA shall follow the guidance provided in the latest version of the “Guidelines on Assessment of Debundling for SSC Project Activities”.		OK
B.3.12	Are there conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance?	/1/	DR	If any public funding has been granted to the implementation of the CPA, the CPA will have to provide affirmation that funding from Annex 1 parties, if any, does not result in a diversion of official development assistance.		OK
B.3.13	Are all eligibility criteria verifiable, and sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA?	/1/	DR	Eligibility criteria i and k of the Standard – “Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” are missing in the PoA-DD.	CAR-4	OK
B.4 Application of methodologies by the PoA (VVS §190)						
B.4.1	Does the PoA apply approved methodologies and the correct and valid version thereof? If during the course of validation the originally applied version of the methodology expires, a CAR shall be raised in	/1/	DR	Yes, the PoA applies the small scale methodology AMS-III.F – Avoidance of methane emissions through composting, version 11.0, the latest version available at the time of webhosting.		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
Table 3 of the validation protocol. Any new requirements of the revised version of the methodology not yet validated in Table 2 of the validation protocol shall be validated in Table 3 as part of the assessment of the CAR raised.						
B.4.2	If the programme applies multiple methodologies, is their application in accordance with the PoA Standard?	/1/	DR	Not applicable, as the PoA applies only one methodology – AMS-III.F.		OK
B.4.3	If the PoA applies small-scale methodologies, does the PoA also comply with the general guidelines to SSC CDM methodologies, which provides guidelines on equipment capacity, equipment performance/lifetime, baseline identification for type-II/III Greenfield project activities, sampling and other monitoring-related issues?	/1/		Yes, the PoA complies with the general guidelines to SSC CDM methodologies.		OK
B.5 Management system of the PoA (VVS § 186) <i>Assessment of the PoA management systems in accordance with the PoA standard</i>						
B.5.1	Is there a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies?	/1/	DR	Yes, there is a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies.		OK
B.5.2	Are there records of arrangements for training and capacity development for personnel?	/1/	DR	Yes there are records of arrangements for training and capacity development for personnel.		OK
B.5.3	Are there procedures for technical review of inclusion of CPAs?	/1/	DR	As per the PoA-DD, a checklist would be used while including a CPA under this PoA. Copy of the checklist may be provided.	CC	OK
B.5.4	Is there 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)?	/1/	DR	As per the PoA-DD “Double counting is avoided by the unique identification of each CPA using its coordinates in the Global Positioning System. Also the CPA Operator shall demonstrate that this project activity shall not lead to double counting of Emission Reduction by confirming that this project activity shall not be a part of any		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question		Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
				of the below mentioned category post approval of the project activity under CDM: (1) Standalone CDM project activity, (2) Bundled CDM project activity, (3) Another registered PoA”.		
B.5.5	Is there a records and documentation control process for each CPA under the PoA?	/1/	DR	Yes. The respective CPA owner will take care of records and documentation control process.		OK
B.5.6	Are there measures for continuous improvements of the PoA management system?	/1/	DR	Yes there are records of arrangements for training and capacity development for personnel.		OK
B.5.7	Do the operational and management arrangements established by the coordinating entity include provisions to ensure that CPA implementers are aware and have agreed that their activity is being subscribed to the PoA?	/1/	DR	As per the PoA-DD, a checklist would be used while including a CPA under this PoA. Copy of the checklist may be provided.	CL-3	OK
C Duration of the PoA, Crediting Period (VVS § 197)						
C.1.1	Is the PoA starting date and length of the PoA clearly defined and evidenced? Is the start date of a PoA either (a) the date of notification of the intention to seek the CDM status by the coordinating/managing entity to the secretariat and the DNA; or (b) the date of publication of the PoA-DD for global stakeholder consultation?	/1/	DR	The start date of the PoA is the date of publication of the PoA-DD for global stakeholder consultation ie 20 March 2014.		OK
C.1.2	Does the PoA design documentation confirm that the length of the PoA does not exceed 28 years (60 years for A/R)?	/1/	DR	Yes, the length of the PoA is 28 years.		OK
D Environmental Impacts (VVS § 134-137, VVS § 199-200)				<input type="checkbox"/> Analysis at PoA level <input checked="" type="checkbox"/> Analysis at CPA level This section must only be completed if the analysis of environmental impacts is at PoA level.		
D.1.1	Are there any host country requirements for an Environmental Impact Assessment (EIA), and if yes, is an	/1/	DR	Not applicable as the analysis is at CPA level.		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
EIA approved? Does the approval contain any conditions that need monitoring? For small-scale project activities, is an assessment of the environmental impacts of the proposed CDM project activity is required by the host Party?					
E Local stakeholder consultation (VVS § 138-140, VVS § 201-202)			<input type="checkbox"/> Consultation at PoA level <input checked="" type="checkbox"/> Consultation at CPA level This section must only be completed if the analysis of environmental impacts is at PoA level.		
E.1.1 Have relevant stakeholders been consulted?	/1/	DR	Not applicable as the consultation is at CPA level.		OK

PART II. Generic component project activity (CPA)					
A Description of each generic CPA (VVS § 189)					
A.1.1	Does the description of each generic CPA sufficiently cover all relevant elements, is accurate and does it provides the reader with a clear understanding of the nature of the proposed CPAs?	/1/	DR	The description of CPA is clearly provided in the PoA-DD.	OK
A.1.2	If applicable, are all different types of generic CPAs clearly described?	/1/	DR	Only one type of CPA is included in the PoA. Each CPA under this PoA will be in compliance with the applied methodology AMS-III.F and a the threshold of 20 ktCO ₂ e of emission reduction for type III small scale project.	OK
B Application of a baseline and monitoring methodology(ies)					
B.1 Title and reference of the approved baseline and monitoring methodology(ies) selected					
B.1.1	Are the exact reference and title of approved methodology(ies) and tools listed?	/1/	DR	Yes, the exact reference and title of approved methodology (AMS-III.F, version 11.0) and applicable tools are listed.	OK
B.1.2	Are valid version of approved methodology(ies) and tools applied?	/1/	DR	Yes, the exact reference and title of approved methodology (AMS-III.F, version 11.0) and applicable tools are listed.	OK
B.2 Applicability of methodology (and tools) (VVS § 73-77)					
<i>Insert a row for each applicability criteria of the applied methodology (and tools)</i>					
B.2.1	How was it validated that each specific CPA complies with the following applicability criteria 1:	/1/	DR	The CPAs to be implemented under this PoA will involve controlled aerobic treatment of the	OK

	This methodology comprises measures to avoid the emissions of methane to the atmosphere from biomass or other organic matter that would have otherwise been left to decay anaerobically in a solid waste disposal site (SWDS), or in an animal waste management system (AWMS), or in a wastewater treatment system (WWTS). In the project activity, controlled aerobic treatment by composting of biomass is introduced?			biomass fraction of MSW that would otherwise have been left to decay anaerobically in a SWDS by composting of MSW. Emission reductions derive from the avoidance of methane formation from decay of MSW in landfills.		
B.2.2	How was it validated that each specific CPA complies with the following applicability criteria 2: The project activity does not recover or combust landfill gas from the disposal site (unlike AMS-III.G “Landfill methane recovery”), and does not undertake controlled combustion of the waste that is not treated biologically in a first step (unlike AMS-III.E “Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment”). Project activities that recover biogas from wastewater treatment shall use the methodology AMS-III.H “Methane recovery in wastewater treatment”. Project activities involving co-digestion of organic matters shall apply the methodology AMS-III.AO “Methane recovery through controlled anaerobic digestion”.	/1/		The CPAs to be included under this PoA will only produce compost from MSW and do not recover/ combust landfill gas.		OK
B.2.3	How was it validated that each specific CPA complies with the following applicability criteria 3: Measures are limited to those that result in emission reductions of less than or equal to 60 kt CO ₂ equivalent annually.	/1/		The eligibility criterion for the PoA requires CPAs to aim at annual emission reduction of no more than 20 000 tons CO ₂ e in each year of the crediting period.		OK
B.2.4	How was it validated that each specific CPA complies with the following applicability criteria 4: This methodology is applicable to the composting of the organic fraction of municipal solid waste and biomass waste from agricultural or agro-industrial activities including manure.	/1/		The project activity shall be aiming at aerobic composting of the organic fraction of MSW that would otherwise be left to decay in a SWDS.		OK
B.2.5	How was it validated that each specific CPA complies with	/1/		This PoA includes CPAs undertaking		OK

	<p>the following applicability criteria 5:</p> <p>This methodology includes construction and expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For project activities that increase capacity utilization at existing facilities, project participant(s) shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate CDM project activity. The special efforts should be identified and described</p>			<p>construction and/or expansion of treatment facilities as well as activities that increase capacity utilization at an existing facility. For CPAs that increase capacity utilization at existing facilities, CPAs shall demonstrate that special efforts are made to increase the capacity utilization, that the existing facility meets all applicable laws and regulations and that the existing facility is not included in a separate CDM project activity. The special efforts should be identified and described by the CPA before inclusion in the PoA.</p>		
B.2.6	<p>How was it validated that each specific CPA complies with the following applicability criteria 6:</p> <p>This methodology is also applicable for co-composting wastewater and solid biomass waste, where wastewater would otherwise have been treated in an anaerobic wastewater treatment system without biogas recovery. The wastewater in the project scenario is used as a source of moisture and/or nutrients to the biological treatment process e.g. composting of empty fruit bunches (EFB), a residue from palm oil production, with the addition of palm oil mill effluent (POME) which is the wastewater co-produced from palm oil production.</p>	/1/	DR	<p>As, confirmed during the interview with the PP, CPAs under this PoA are limited to project activities undertaking aerobic composting of MSW and no co-composting is involved.</p>		OK
B.2.7	<p>How was it validated that each specific CPA complies with the following applicability criteria 7:</p> <p>In case of co-composting, if it cannot be demonstrated that the organic matter would otherwise been left to decay anaerobically, baseline emissions related to such organic matter shall be accounted for as zero, whereas project emissions shall be calculated according to the procedures presented in this methodology for all co-composted substrates.</p>	/1/	DR	<p>As, confirmed during the interview with the PP, CPAs under this PoA are limited to project activities undertaking aerobic composting of MSW and no co-composting is involved.</p>		OK
B.2.8	<p>How was it validated that each specific CPA complies with</p>	/1/	DR	<p>The location and characteristics of the disposal</p>	CAR-5	OK

	<p>the following applicability criteria 8:</p> <p>The location and characteristics of the disposal site of the biomass, animal manure and cocomposting wastewater in the baseline condition shall be known, in such a way as to allow the estimation of its methane emissions, using the provisions of AMS-III.G, AMS-III.E (concerning stockpile), AMS-III.D “Methane recovery in animal manure management systems” or AMS-III.H respectively.</p> <p>Project activities for composting of animal manure shall also meet the requirements under paragraphs 1, and 2(c) of AMS-III.D. Further no bedding material is used in the animal barns or intentionally added to the manure stream in the baseline. Blending materials may be added in the project scenario to increase the efficiency of the composting process (e.g. to achieve a desirable C/N ratio or free air space value), however, only monitored quantity of solid waste or manure or wastewater diverted from the baseline treatment system is used for emission reduction calculation. The following requirement shall be checked ex ante at the beginning of each crediting period:</p> <p>(a) Establish that identified landfill(s)/stockpile(s) can be expected to accommodate the waste to be used for the project activity for the duration of the crediting period;</p> <p>OR</p> <p>(b) Establish that it is common practice in the region to dispose off the waste in solid waste disposal site (landfill)/stockpile(s).</p>			<p>site for MSW composted under this PoA will be indicated in each CPA with information of the amount of waste received at the landfill as well as documentation of the depth of the landfill and every other information needed to estimate the MCF and estimate its methane emissions according to the provisions of AMS-III.F.</p> <p>As required by the methodology applicability criterion 8, the demonstration of “the identified landfill can be expected to accommodate the waste to be used for the project activity for the duration of the crediting period” OR “establish that it is a common practice in the region to disposed off the waste in solid disposal site” not seen in the webhosted PoA.</p> <p>Also to clarify - The methodology refers to other methodologies for the estimation of methane emissions - using the provisions of AMS-III.G, AMS-III.E (concerning stockpile), AMS-III.D “Methane recovery in animal manure management systems” or AMS III.H respectively whereas the project participant has adopted the applied methodology AMS-III.H for the baseline calculation.</p>		
B.2.9	<p>How was it validated that each specific CPA complies with the following applicability criteria 9:</p> <p>The project participants shall clearly define the geographical boundary of the region referred in paragraph 8(b), and document it in the CDM-PDD. In defining the geographical boundary of the region, project participants should take into account the source of the waste i.e. if waste is transported up to 50 km, the region may cover a radius of 50 km around the</p>	/1/	DR	<p>The geographical project boundary for each CPA will be clearly defined in the CPA-DD with an estimate of the maximum distance for transportation of waste to the composting site.</p> <p>The distance to which the final product will be transported will be estimated and the estimate will be justified from the CPA circumstances.</p> <p>Letter from the DoE for the inclusion of a</p>	CL3	OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

	project activity. In addition, it should also consider the distance to which the final product after composting will be transported. In either case, the region should cover a reasonable radius around the project activity that can be justified with reference to the project circumstances but in no case it shall be more than 200 km. Once defined, the region should not be changed during the crediting period(s).			maximum distance of 200 km restriction between the MSW source point and the compost depot to be provided.		
B.2.10	How was it validated that each specific CPA complies with the following applicability criteria 10: In case produced compost is handled aerobically and submitted to soil application, the proper conditions and procedures (not resulting in methane emissions) must be ensured.	/1/	DR	The eligibility criteria include a provision for each CPA to make provisions for soil application of the compost to ensure that the compost is stored and applied in a manner that does not lead to anaerobic conditions.		OK
B.2.11	How was it validated that each specific CPA complies with the following applicability criteria 11: In case produced compost is treated thermally/mechanically, the provisions in AMS-III.E related to thermal/mechanical treatment shall be applied.	/1/	DR	The compost is not expected to be treated thermally/mechanically, but if so the CPA will be obliged to follow the applicable provisions of AMS-III.E		OK
B.2.12	How was it validated that each specific CPA complies with the following applicability criteria 12: In case produced compost is stored under anaerobic conditions and/or delivered to a landfill, emissions from the residual organic content shall to be taken into account and calculated as per the latest version of the methodological tool "Emissions from solid waste disposal sites".	/1/	DR	The project activity aims at selling all compost produced to local farmers. The monitoring plan includes provisions for monitoring all amounts of compost which is landfilled or stored under anaerobic conditions. In case such emissions occur in spite of these efforts, the calculation tool for calculation of leakage emissions will be added calculation of such emissions in accordance with the latest version of the methodological tool "Emissions from solid waste disposal sites". It was discussed and confirmed during the site visit interactions that the project activity aims only at selling all compost produced to local farmers. In this respect the compliance details provided in the webhosted PoA-DD against the	CAR-5	OK

			methodology applicability criterion 12 is not correct.		
B.2.13	Is the selected baseline on of the baseline(s) described in the methodology and this hence confirms the applicability of the methodology?	/1/	DR	The selected baseline is directly sorced from the applied methodology and hence in compliance with the applied methodology.	OK
B.3 Project boundary of each generic CPA (VVS § 82-87)					
B.3.1	What are each generic CPA's system boundaries (components and facilities used to mitigate GHGs)? Are they clearly defined and in accordance with the methodology?	/1/	DR	Yes, a schematic diagram on the system boundaries is provided in the PoA-DD. However the project boundary in the webhosted PoA-DD and the CPA-DD do not include the MSW source, as required by the methodology.	CAR-6 OK
B.3.2	Which GHG sources are identified for the CPA? Does the identified boundary cover all possible sources linked to the project activity? Give reference to documents considered to arrive at this conclusion.	/1/	DR	CO ₂ , CH ₄ and N ₂ O are the GHGs identified for the CPA. Yes identified boundary cover all possible sources linked to the project activity.	OK
B.3.3	Do the system boundaries for the CPA as described in the CPA-DD fully comply with the system boundaries stipulated by the applied baseline methodology?	/1/	DR	The schematic diagram on the system boundaries is provided in the PoA-DD. However the project boundary in the webhosted PoA-DD and the CPA-DD do not include the MSW source, as required by the methodology.	CAR-6 OK
B.3.4	Does the project involve other emissions sources not foreseen by the methodologies that may question the applicability of the methodology? Do these sources contribute with more than 1% of the estimated emission reductions of the project?	/1/	DR	The project activity does not involve other emission sources not foreseen by the applied methodology.	OK

B.4 Baseline scenario determination and description (VVS § 88-95 / Identification of alternatives to the project activity (VVS § 113-116)) <i>Ensure that the evaluation of all alternatives provided and required by the methodology and also possible alternatives/offshoots of alternatives are discussed. If baseline alternatives required to be considered by the methodology are considered not applicable, please assess the justification for this.</i>					
B.4.1	Which baseline scenarios have been identified? Is the list of baseline scenarios complete? Does the list include as one of the options that the project activity is undertaken without being registered as a proposed project activity? Does the list contains all plausible alternatives which are viable means of supplying the comparable outputs or services that are to be supplied by the proposed project activity?	/1/	DR	The baseline scenario identified for the project activity is – in the absence of the project activity, biomass and other organic matter (including manure where applicable) are left to decay within the project boundary and methane is emitted to the atmosphere. The baseline scenario identified for the project activity is directly sourced from the applied methodology.	OK
B.4.2	Could the project activity in absence of the CDM or other baseline alternatives also be implemented by other entities than the CDM project participants? If so, has this also been included in the list of baseline scenarios?	/1/	DR	Not applicable, as the baseline scenario identified for the project activity is directly sourced from the applied methodology.	OK
B.4.3	How have the other baseline scenarios been eliminated in order to determine the baseline?	/1/	DR	Not applicable, as the baseline scenario identified for the project activity is directly sourced from the applied methodology.	OK
B.4.4	What is the baseline scenario?	/1/	DR	The baseline scenario identified for the project activity is – in the absence of the project activity, biomass and other organic matter (including manure where applicable) are left to decay within the project boundary and methane is emitted to the atmosphere.	OK
B.4.5	Is the determination of the baseline scenario in accordance with the guidance in the methodology?	/1/	DR	The baseline scenario identified for the project activity is directly sourced from the applied methodology.	OK
B.4.6	Has the baseline scenario been determined using	/1/	DR	The baseline scenario identified for the project	OK

	conservative assumptions where possible?			activity is directly sourced from the applied methodology.		
B.4.7	Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies? Does the baseline scenario comply with all applicable and enforced legislation?	/1/	DR	The baseline scenario identified for the project activity is directly sourced from the applied methodology.		OK
B.4.8	Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	/1/	DR	The baseline scenario identified for the project activity is directly sourced from the applied methodology.		OK
B.4.9	Is the baseline determination adequately documented in the PoA-DD? <ul style="list-style-type: none"> • All assumptions and data used by the project participants are listed in the PoA-DD and related document to be submitted for registration. The data are properly referenced. • All documentation is relevant as well as correctly quoted and interpreted. • Assumptions and data can be deemed reasonable • Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD. • The methodology has been correctly applied to identify what would occurred in the absence of the proposed CDM project activity 	/1/	DR	The baseline scenario identified for the project activity is directly sourced from the applied methodology.		OK
B.5 Demonstration of eligibility for each generic CPA						
B.5.1	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? <p>The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA.</p>	/1/	DR	The geographical boundary of the CPA shall be within the borders of Bangladesh.		OK
B.5.2	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? <p>Conditions that avoid double counting of emission</p>	/1/	DR	Double counting is avoided by the unique identification of each CPA using its coordinates in the Global Positioning System. Also the CPA Operator shall demonstrate that this project		OK

	reductions like unique identifications of product and end-user locations (e.g. programme logo).			activity shall not lead to double counting of Emission Reduction by confirming that this project activity shall not be a part of any of the below mentioned category post approval of the project activity under CDM: (1) Standalone CDM project activity, (2) Bundled CDM project activity, (3) Another registered PoA.		
B.5.3	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications.	/1/	DR	The technology/measure used in CPAs under the PoA is aerobic composting of Municipal Solid Waste, where the compost is sold on the open market for use as fertiliser. However elaboration on the specifications of the technology including the type, capacity and other key features of the systems not seen in the PoA-DD.	CAR-4	OK
B.5.4	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Conditions to check the start date of the CPA through documentary evidence.	/1/	DR	The starting date of any CPA will be checked by introducing an opening procedure for the CPA with requirements to be in place. Following these procedures will be conditional for inclusion as a CPA under the PoA. Compliance with the procedures will have to be documented through letters, email or similar between the CME and the CPA confirming that the CME wishes to include the project activity as a CPA under the PoA. The above start date details are not acceptable as the selected start date for the CPAs should be in line with the start date definition provided in the CDM glossary.	CAR-4	OK
B.5.5	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Conditions that ensure compliance with applicability and	/1/	DR	The applicability of the CPA with the chosen methodology AMS-III.F shall be demonstrated in the CPA-DD using the applicability criteria of the latest version of AMS-III.F and will be checked		OK

	other requirements of single or multiple methodologies applied by CPAs.			by the CME before inclusion as a CPA under the PoA.	
B.5.6	<p>Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria?</p> <p>The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as specified in section 3.1 above</p>	/1/	DR	<p>The part of the additionality test to be met by each individual CPA is the demonstration that the CPA is an aerobic composting plant according to the applicability criteria listed in the latest version of AMS III F and therefore a type III project together with documentation that the CPA is a micro scale project activity. The demonstration shall include calculation of annual ex ante emission reductions for each year of the crediting period demonstrating that the CPA will remain within the micro scale threshold for being a microscale project activity in each year of the period, and thus include documentation that the project activity will aim to achieve emission reductions at a scale of no more than 20 k t CO₂e per year in each year of the crediting period. This documentation will be based on:</p> <ul style="list-style-type: none"> • the agreements between project participants and the CME. • contracts on supply of MSW between the CPA and the municipality or other administrative entity responsible for MSW handling, as well as on • the physical design of the plant showing the maximum MSW capacity of the plant corresponds to the estimated annual emission reductions anticipated, though allowing for a reserve capacity of up to 50% to be used in periods where the composition of received MSW includes less waste with a high biodegradability such as food and vegetable. 	OK

B.5.7	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis.	/1/	DR	The CPA will have to undertake a stakeholder consultation following the rules for standalone CDM projects and will have to demonstrate that any comment(s) received in this process has been taken into due account when designing the CPA.		OK
B.5.8	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance.	/1/	DR	If any public funding has been granted to the implementation of the CPA, the CPA will have to provide affirmation that funding from Annex 1 parties, if any, does not result in a diversion of official development assistance.		OK
B.5.9	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation.)	/1/	DR	This eligibility criterion as per the Standard requirement (para 16.i) not detailed in the PoA-DD.	CAR-4	OK
B.5.10	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Where applicable, the conditions related to sampling requirements for the PoA in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities”.	/1/	DR	Sampling may be introduced if monitoring of storing, end use and application of compost at the end user is required. The sampling procedure needs to be repeated once every year. Sampling details provided in the PoA-DD is not complete and it is not clear whether it is in line with the sampling guidelines.	CAR-4	OK
B.5.11	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Where applicable, the conditions that ensure that every CPA (in aggregate if it comprises of independent sub units) meets the small-scale or microscale threshold ¹⁰ and remains within those thresholds throughout the crediting period of the CPA.	/1/	DR	This eligibility criterion as per the Standard requirement (para 16.k) “ <i>where applicable the conditions that ensure that every CPA meets the small-scale or microscale threshold and remains within those thresholds throughout the crediting period of the CPA</i> ” not detailed in the PoA-DD.	CAR-4	OK

B.5.12	Has it been sufficiently justified that each generic CPA complies with the following eligibility criteria? Where applicable, the requirements for the debundling check, in case the CPAs belongs to small-scale or microscale project categories.	/1/	DR	The CPA shall in the CPA-DD demonstrate that the project activity is not a debundled component of large scale CDM project. In doing so, the CPA shall follow the guidance provided in the latest version of the “Guidelines on Assessment of Debundling for SSC Project Activities”. In accordance with paragraph II of these guidelines.		OK
B.6 Algorithms and/or formulae used to determine emission reductions of each CPA (VVS § 96-100)						
Data and parameters that are available at validation and that are not monitored						
B.6.1	How was the “Default value for the model correction factor to account for model uncertainties” available at validation verified?	/1/	DR	The value applied is 0.85, sourced from the methodological tool to calculate “Emissions from solid waste disposal sites”.		OK
B.6.2	How was the “Oxidation factor (reflecting the amount of methane from SWDS that is oxidized in the soil or other material covering the waste)” available at validation verified?	/1/	DR	The value applied is 0.1, sourced from the methodological tool to calculate “Emissions from solid waste disposal sites”.		OK
B.6.3	How was the “Fraction of methane in the SWDS gas (volume fraction)” available at validation verified?	/1/	DR	The value applied is 0.5, sourced from the IPCC.		OK
B.6.4	How was the “Default value for the fraction of degradable organic carbon (DOC) in MSW that decomposes in the SWDS” available at validation verified?	/1/	DR	The value applied is 0.5, sourced from the IPCC.		OK
B.6.5	How was the “Methane correction factor” available at validation verified?	/1/	DR	The value applied for MCF is 0.8, which is applicable for unmanaged solid waste disposal sites with a depth of greater than or equal to 5 meters. Project participant to provide documentary evidences to support the application of 0.8 in the BE calculation.	CL-4	OK
B.6.6	How was the “Fraction of degradable organic carbon in the waste type <i>j</i> (weight fraction)” available at validation verified?	/1/	DR	Sourced from IPCC. • For empty fruit brunches (EFB), as their characteristics are similar to garden waste, the		OK

			<p>value for garden, yard and park waste in Table 4 may be used as a default.</p> <ul style="list-style-type: none"> • For industrial sludge, either a value of 9% (% wet sludge) may be used as a default, assuming an organic dry matter content of 35 percent, or alternatively, if the percentage of organic dry matter content is known, then the DOC value may be calculated as follows: $\text{DOC}_j (\% \text{ wet sludge}) = 9 * (\% \text{ organic dry matter content} / 35)$. • For domestic sludge, either a value of 5% (% wet sludge) may be used as a default, assuming an organic dry matter content of 10 percent, or alternatively, if the percentage of organic dry matter content is known, then the DOC value may be calculated as follows: $\text{DOC}_j (\% \text{ wet sludge}) = 5 * (\% \text{ organic dry matter content} / 10)$. <p>To clarify the procedure to be adopted, in case a waste type is not comparable to MSW (to use IPCC 2006 values) including the actual MSW analysis frequency and the details of laboratories where the analysis would be carried out.</p>	CL-4	
B.6.7	How was the “Decay rate for the waste type <i>j</i> ” available at validation verified?	/1/	DR	Sourced from IPCC for “wet, tropical country with mean annual temperature above 20 C and MAP above 1000 mm/yr”.	OK
B.6.8	How was the “Global Warming Potential of methane” available at validation verified?	/1/	DR	The value applied is 21. First commitment period GWP of methane is used in the PoA-DD, whereas the project activity falls in the second commitment period.	CAR-7 OK
B.6.9	How was the “Global Warming Potential of N ₂ O” available at validation verified?	/1/	DR	The value applied is 310, First commitment period GWP of methane is used in the PoA-DD, whereas the project activity falls in the second	CAR-7 OK

				commitment period.		
B.6.10	How was the “Default emission factor of methane per tonne of waste composted (wet basis)” available at validation verified?	/1/	DR	The value applied is 0.002, sourced from the methodological tool to calculate “Project and leakage emissions from composting”.		OK
B.6.11	How was the “Default emission factor of nitrous oxide per tonne of waste composted (wet basis)” available at validation verified?	/1/	DR	The value applied is 0.0002, sourced from the methodological tool to calculate “Project and leakage emissions from composting”.		OK
B.6.12	How was the “Default value for the specific quantity of electricity consumed per tonne of waste composted” available at validation verified?	/1/	DR	The value applied is 0.01, sourced from the methodological tool to calculate “Project and leakage emissions from composting”.		OK
B.6.13	How was the “Default emission factor for fossil fuel consumed by the composting activity per tonne of waste composted (wet basis)” available at validation verified?	/1/	DR	The value applied is 0.0207 tCO ₂ /t, sourced from the methodological tool to calculate “Project and leakage emissions from composting”.		OK
B.6.14	How was the “Number of samples collected during the year <i>x</i> ” available at validation verified?	/1/	DR	Monthly one sample. As no significant changes in the composition of MSW forseen on a day to day basis, nobthly one sample deemed appropriate.		OK
B.6.15	How was the “Emission factor for project emissions from source <i>j</i> (compost)” available at validation verified?	/1/	DR	The value applied is 1.3, sourced from the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”.		OK
B.6.16	How was the “Average technical transmission and distribution losses for providing electricity to source <i>j</i> ” available at validation verified?	/1/	DR	The value applied is 20%, sourced from the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”.		OK
B.6.17	In case any of the parameters above were determined based on sampling, was the sample adequate and did it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, did it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?	/1/	DR	Not applicable.		OK
Baseline emissions						
B.6.18	Are the calculations documented according to the approved methodology and tool and in a complete and transparent	/1/	DR	Yes, the calculations documented are according to the approved methodology and tool and in a		OK

	manner?			complete and transparent manner		
B.6.19	Have conservative assumptions been used when calculating the baseline emissions?	/1/	DR	Yes		OK
B.6.20	Are uncertainties in the baseline emission estimates properly addressed?	/1/	DR	Yes		OK
B.6.21	If the calculations of baseline emissions are based on sampling, does this comply with the Standard for sampling and surveys?	/1/	DR	Not applicable.		OK
Project emissions						
B.6.22	Are the calculations documented according to the approved methodology and tool and in a complete and transparent manner?	/1/	DR	Yes, the calculations documented are according to the approved methodology and tool and in a complete and transparent manner.		OK
B.6.23	Have conservative assumptions been used when calculating the project emissions?	/1/	DR	Yes, conservative assumptions have been used when calculating the project emissions.		OK
B.6.24	Are uncertainties in the project emission estimates properly addressed?	/1/	DR	The algorithms used for the calculation of project emission are directly sourced from the associated tool.		OK
B.6.25	If the calculations of project emissions are based on sampling, does this comply with the Standard for sampling and surveys?	/1/	DR	Not applicable.		OK
Leakage						
B.6.26	Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	/1/	DR	<p>No leakage identified as there will no transfer of equipment from another activity or if the existing equipment is transferred to another activity.</p> <p>However it is stated in the PoA-DD “<i>In case compost is subject to anaerobic storage or disposed of in a SWDS, leakage shall be estimated to account for methane emissions from the anaerobic decay of compost. The relevant procedures in the leakage part of the methodological tool “Project and leakage emissions from composting” shall be followed</i>”.</p>	CL5	OK

			More clarity needed with respect to the above condition.		
B.6.27	Have conservative assumptions been used when calculating the leakage emissions?	/1/	DR	Yes	OK
B.6.28	Are uncertainties in the leakage emission estimates properly addressed?	/1/	DR	Yes	OK
B.6.29	If the calculations of leakage emissions are based on sampling, does this comply with the Standard for sampling and surveys	/1/	DR	Not applicable	OK
Emission Reductions					
B.6.30	Algorithms and/or formulae used to determine emission reductions: <ul style="list-style-type: none"> •All assumptions and data used by the project participants are listed in the PoA-DD and related document submitted for registration. The data are properly referenced •All documentation is correctly quoted and interpreted. •All values used can be deemed reasonable in the context of the project activity •The methodology has been correctly applied to calculate the emission reductions and this can be replicated by the data provided in the PoA-DD and supporting files to be submitted for registration. 	/1/	DR	CL 5, CL 4 and CAR 7 to be addressed to close the issues raised under emission reduction calculations.	CL 4, CL 5, CAR 7 OK
B.7 Monitoring plan (VVS § 131-133)					
Data and parameters monitored					
B.7.1	Do the means of monitoring described in the plan comply with the requirements of the methodology?	/1/	DR	To demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters / details not seen in the webhosted PoA-DD.	CAR-8 OK
B.7.2	Does the monitoring plan contains all necessary parameters, and are they clearly described?	/1/	DR	To demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters /	CAR-8 OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

			details not seen in the webhosted PoA-DD. Also since the details related to the parameter Z_x are already included in the parameter $P_{n,j,x}$, a separate monitoring of Z_x is not deemed necessary.		
B.7.3	In case parameters are measured, is the measurement equipment described? Describe each relevant parameter.	/1/	DR	The parameter “Amount of waste composted per year”, is measured using a weigh bridge. However to demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters / details not seen in the webhosted PoA-DD.	CAR-8 OK
B.7.4	In case parameters are measured, is the measurement accuracy addressed and deemed appropriate? Describe each relevant parameter.	/1/	DR	Accuracy details of monitoring equipment not provided in the PoA-DD.	CAR-8 OK
B.7.5	In case parameters are measured, are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate? Describe each relevant parameter.	/1/	DR	Yes, calibration of the weighbridge will be done as per the procedures established by the instrument manufacturer.	OK
B.7.6	Is the monitoring frequency adequate for all monitoring parameters? Describe each parameter.	/1/	DR	To demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters / details not seen in the webhosted PoA-DD.	CAR-8 OK
B.7.7	Is the recording frequency adequate for all monitoring parameters? Describe each parameter.	/1/	DR	To demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters / details not seen in the webhosted PoA-DD.	CAR-8 OK
B.7.8	In case any of the parameters will be determined based on sampling, is the sample plan adequate and does it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, does it achieve a 90/10 confidence/precision as the criteria for	/1/	DR	To demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters / details not seen in the webhosted PoA-DD.	CAR-8 OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

	reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?					
	Ability of project participants to implement monitoring plan					
B.7.9	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/1/	DR	As mentioned in the PoA-DD, a monitoring manual and specific standard operating procedures will be prepared before start of the crediting period.		OK
B.7.10	Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/	DR	mentioned in the PoA-DD, a monitoring manual and specific standard operating procedures will be prepared before start of the crediting period.		OK
B.7.11	Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/1/	DR	mentioned in the PoA-DD, a monitoring manual and specific standard operating procedures will be prepared before start of the crediting period.		OK
B.7.12	Will 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 project activity, whichever occurs later?	/1/	DR	Yes. This is mentioned in the PoA-DD.		OK
	Monitoring of sustainable development indicators/ environmental impacts					
B.7.13	Is the monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country?	/1/	DR	Monitoring of sustainable development indicators is not warranted by legislation in the host country.		OK
B.7.14	Does the monitoring plan provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?	/1/	DR	Monitoring of sustainable development indicators is not warranted by legislation in the host country.		OK
B.7.15	Are the sustainable development indicators in line with stated national priorities in the host country?	/1/	DR	Monitoring of sustainable development indicators is not warranted by legislation in the host country.		OK

Table 3 Resolution of corrective action requests and clarification requests

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
<p>CAR 1</p> <p>As required by the VVS para 189 “<i>The DOE shall assess the CDM-PoA-DD and the PoA-specific CDM-CPA-DD that is submitted by the coordinating/managing entity and shall confirm the framework developed for the implementation of the PoA, and defining a CPA under the PoA</i>”, the framework for the implementation of the proposed CDM PoA and inclusion of CPAs under the PoA not provided in the webhosted PoA-DD.</p>	A.2.4	The framework for implementation is mentioned in section A2 and A3 and Section C of the PoA-DD	<p>Section A.2 and A.3 of the revised PoA-DD /1/ have been elaborated with respect to the framework for implementation of the PoA.</p> <p>OK</p> <p>CAR 1 is closed.</p>
<p>CAR 2</p> <p>MoC</p> <p>Project participant is required to provide the MoC form, supported with documentary evidence as per provision of VVS , version 5 , Paragraph 53-61.</p> <p>The project participant has not provided the F-CDM-MOC form to DNV. Supporting documents indicating corporate identity of all project participants and focal points included in the MoC, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories needs to be provided as per the requirement of VVS , version 5 para 55-61 in addition to the filled up MOC form.</p>	A.5.1, A.5.2	<p>MoC form has been prepared.</p> <p>A letter from Department of Environment confirming the identity of the focal person for the MOC is attached.</p>	<p>MoC form has been received by DNV. The project participant – Department of Environment, Government of Bangladesh has nominated Mr Abul Kalam Azad as focus person to sign in the MoC for the PoA /45/.</p> <p>OK</p> <p>CAR 2 is closed.</p>
<p>CAR 3</p> <p>Demonstration of additionality as required by the standard “Demonstration of additionality,</p>	B.1.1	The interpretation of the PP is that the referred paragraph 7 in the document “Demonstration of additionality,	<p>The PoA additionality is based on the – additionality of microscale project activity. In section B of the revised PoA-DD, the</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
development of eligibility criteria and application of multiple methodologies for programmes of activities”, para 7 <i>“Additionality shall be demonstrated by establishing that in the absence of CDM PoA, none of the implemented CPAs would occur”</i> not seen in the PoA-DD.		development of eligibility criteria and application of multiple methodologies for programmes of activities” cannot be considered alone but should be read together with one of the subsequent three paragraphs (para 8, 9 or 10). One of the eligibility criteria for inclusion of a CPA relates to the amount of the emission reductions as well as the location of each of the CPAs. Each CPA has to comply with the additionality test for Micro Scale projects. As no CPA can be include if not complying with this test it is also proved that no CPAs will be implemented in the absence of the PoA.	project participant has clearly stated that the project would not be viable without the income from CERs /1/. Also the CPAs in this Type III project activities aim to achieve emission reductions at a scale of no more than 20 ktCO ₂ e per year and the geographic location of the CPAs are limited to Bangladesh a (a LDC). Hence the CPA are additional as per the Guideline for “Demonstrating additionality of microscale project activities. OK CAR 3 is closed.
CAR 4 Eligibility criteria: Following are the issued raised with respect to the eligibility criteria: a. Elaboration on the specifications of the technology including the type, capacity and other key features of the systems not seen in the PoA-DD. b. The provided start date details are not acceptable as the selected start date for the CPAs should be in line with the start date definition provided in the CDM glossary. c. Eligibility criterion related to target group and distribution mechanism is not	B.3.3, B.3.4, B.3.8, B.3.9, B.3.13, B.5.3, B.5.4, B.5.9, B.5.10, B.5.11	a. Details of the technology has been included in the PoA-DD. b. Start date of CPA 01 is 18.05.2014. This is date when the agreement was signed with the contractor for construction of the plant. c. Not applicable d. Each CPA will be monitored by the CME and in accordance with the monitoring plan. Sampling approach will hence not be relevant. e. i and k have been added in the revised PoA-DD f. Eligibility criteria is added in the generic PoA-DD g. The table containing the eligibility	The eligibility criteria have been elaborated in line with the requierments of “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” /21/ in the revised PoA-DD /1/. OK. CAR 4 is closed.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
<p>discussed in the PoA-DD.</p> <p>d. Sampling details provided in the PoA-DD is not complete and it is not clear whether it is in line with the sampling guidelines.</p> <p>e. Eligibility criteria i and k of the Standard – “Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” are missing in the PoA-DD.</p> <p>f. Eligibility criterion as per the Standard requirement (para 16.k) “<i>where applicable the conditions that ensure that every CPA meets the small-scale or micro-scale threshold and remains within those thresholds throughout the crediting period of the CPA</i>” not detailed in the PoA-DD under Part II, section B.5.</p> <p>g. The eligibility criteria provided in PoA-DD: Part I section B.2 and Part II, section B.5 are not consistent.</p>		<p>criteria have been edited so that information are consistent.</p>	
<p>CAR 5</p> <p>Applicability criteria:</p> <p>Following are the issued raised with respect to the applicability criteria:</p> <p>a. As required by the methodology applicability criterion 8, the demonstration of “the identified landfill</p>	<p>B.2.8, B.2.12</p>	<p>a. As indicated in eligibility criteria (e) the CME is responsible for checking each CPA against the methodology (AMS III.F) applicability. This includes the requirements contained under para 8 in the methodology.</p> <p>b. The AMS III.F is applied and to determine the baseline the first order</p>	<p>The applicability criteria have been elaborated in line with the requirements of the applied methodology AMS-III.F, version 11 /23/ in the revised PoA-DD /1/.</p> <p>a. A report from Asian development bank /40/ has been evidenced, along with national 3R strategy /36/ to establish that it is a common practice in Bangladesh to</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
<p>can be expected to accommodate the waste to be used for the project activity for the duration of the crediting period” OR “establish that it is a common practice in the region to disposed off the waste in solid disposal site” not seen in the webhosted PoA.</p> <p>b. Also to clarify - The methodology refers to other methodologies for the estimation of methane emissions - using the provisions of AMS-III.G, AMS-III.E (concerning stockpile), AMS-III.D “Methane recovery in animal manure management systems” or AMS III.H respectively whereas the project participant has adopted the applied methodology AMS-III.H for the baseline calculation.</p> <p>c. It was discussed and confirmed during the site visit interactions that the project activity aims only at selling all compost produced to local farmers. In this respect the compliance details provided in the webhosted PoA-DD against the methodology applicability criterion 12 is not correct.</p>		<p>decay model is applied, which is in line with the Methodology.</p> <p>c. All the compost produced shall be sold to local farmers. Amount of compost produced and sold shall be monitored</p>	<p>disposed off the waste in solid disposal site.</p> <p>b. The methodology AMS-III.F /23/ is applied in the emission reduction calculations, as the project activity is to recover the organic matter from municipal solid waste as compost and avoid methane emission through a “Municipal Waste Compost Programme”.</p> <p>c. The parameters “Compost produced” and “Compost sold” have been included in the monitoring plan /1/ now to support the applicability criterion 12 requirement.</p> <p>OK.</p> <p>CAR 5 is closed.</p>
<p>CAR 6</p> <p>Project boundary:</p>	<p>B.3.1, B3.3</p>	<p>Project boundary has been changed in the POA-DD and CPA-DD</p>	<p>The project boundary in the revised PoA-DD includes the MSW source /1/.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
A schematic diagram on the system boundaries is provided in the PoA-DD. However the project boundary in the webhosted PoA-DD and the CPA-DD do not include the MSW source, as required by the methodology			OK. CAR 6 is closed.
CAR 7 Global warming potential: First commitment period GWP value of methane and N ₂ O is used in the PoA-DD, whereas the project activity falls in the second commitment period.	B.6.8, B.6.9 B.6.30	GWP value of methane and N ₂ O has been revised in the PoA-DD.	GWP values of methane and N ₂ O are revised for the second commitment period in the revised PoA-DD and the ER calculation /3/ are revised accordingly. OK. CAR 7 is closed.
CAR 8 Monitoring parameters: a. To demonstrate that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”, appropriate monitoring parameters / details not seen in the webhosted PoA-DD b. Also since the details related to the parameter Z _x are already included in the parameter P _{n,j,x} , a separate monitoring of Z _x is not deemed necessary. c. Accuracy details of monitoring equipment not provided in the PoA-DD.	B.7.1, B.7.2, B.7.3, B.7.4, B.7.6, B.7.7, B.7.8	a. An additional monitoring parameter is added, namely the amount (weight) of produced/ & sold compost . Disposal of compost in landfill (which may cause emissions) is unlikely and undesirable as income from sold compost is the main source to ensure viability of the project. All the compost produced shall be sold. b. The parameter Z _x is deleted c. “accuracy of measuring equipment according to supplier specs”	The monitoring plan has been revised in the revised PoA-DD /1/ for the following issues a. The parameters “Compost produced” and “Compost sold” have been included in the monitoring plan now to that there will no project emissions from “compost storage under anaerobic conditions” and /or “compost delivered to landfill”. b. The parameter Z _x has been removed from ex-post monitoring. c. Accuracy details of all monitoring equipment have not been included in the revised PoA-DD. OK CAR 8 is closed.
CL 1 Date of webhosted PoA-DD: Though the date is mentioned in the webhosted PoA-DD (18 April 2014), typo error observed in	A.1.1	The date has been mis-typed. This has been corrected in the revised PoA-DD, which will have the date for the completion of the revised version.	The correct date of webhosted PoA-DD is 18 March 2014. OK CL 1 is closed.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
the date of the webhosted PoA-DD, which was webhosted on 19 March 2014. May clarify the date of webhosted PoA-DD.			
CL 2 Involvement of Annex I Party: Project participant to confirm involvement of any Annex I Party in the project activity at the validation stage.	A.4.1, A.4.2, A.4.3, A.4.5	There is no involvement of Annex 1 party.	The project participant has confirmed that there is no involvement of Annex 1 party in the project activity. OK CL 2 is closed.
CL 3 <i>Ex-ante</i> fixed parameters: a. The value applied for MCF is 0.8, which is applicable for unmanaged solid waste disposal sites with a depth of greater than or equal to 5 meters. Project participant to provide documentary evidences to support the application of 0.8 in the BE calculation. b. To clarify the procedure to be adopted, in case a waste type is not comparable to MSW (to use IPCC 2006 values) including the actual MSW analysis frequency and the details of laboratories where the analysis would be carried out.	B.6.5, B.6.6, B.6.30	a. A drawing of the unmanaged landfill site showing depth of waste disposal site equal to 5 m is attached. b. MSW analysis shall be done on quarterly basis and samples will be analyzed at the Waste Concern's Environmental Engineering Laboratory. The laboratory is endorsed by the Department of Environment, Government	Landfill layout depicting a depth of 5 meters has been submitted to DNV /10/. The layout has been signed by the Mymensingh municipality authority. The details of the MSW analysis have been included in the revised PoA-DD now. OK. CL 3 is closed.
CL 4 Leakage: It is stated in the PoA-DD <i>"In case compost is subject to anaerobic storage or disposed of in a SWDS, leakage shall be estimated to account for methane emissions from the anaerobic decay of compost. The relevant procedures in the leakage part of the methodological tool "Project and leakage emissions from composting" shall be</i>	B.6.26, B.6.30	The text under leakage is edited/revised. Produced / sold compost will be monitored. As the production and selling of compost is the main source of income for the project there will at no point be any incentives for uncontrolled disposal or application of the compost, and hence there are no leakage emissions to include in the calculations.	The parameters "Compost produced" and "Compost sold" have been included in the monitoring plan now to demonstrate nil leakage from the project activity. OK CL 4 is closed.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation conclusion
<i>followed</i> ". Project participant to explain in detail the conditions for accounting leakage.			

Table 4 Forward action requests

Forward action request	Reference to Table 2	Response by project participants
No FAR raised.		

- o0o -

APPENDIX B

CURRICULA VITAE OF THE VALIDATION TEAM MEMBERS

Kakaraparthi Venkata Raman

Mr Kakaraparthi Venkata Raman holds a bachelor degree in Chemical Engineering (B.Tech) and a Diploma in Management. He has an overall experience of 18 years in the Chemical Process Industry - Fertilisers and Chemicals industry (FACT). His main areas of work include a) Technical Services (for Ammonia, Urea, Co-generation thermal power plants (captive), and complex fertilizers plants) for 10 years b) Erection, commissioning and hands-on operation of state of art HTAS 900 TPD Ammonia plant c) Management and operation of Sulphuric acid plant as Plant Manager and d) assisting Management of production unit (General Manager) in management Information System operation and planning of Production & Operations. As a part of the Technical services team, involved in the conduction of technical energy audits of plants and in HAZOP studies (under guidance of EIL).

While in FACT has completed the ISO14001 EMS LA course. Implemented the Environmental Management Systems in the production unit and conducted internal audits.

Experience prior to joining Fertiliser industry includes six months experimental work on charcoal manufacture in Karnataka Regional Engineering college.

Joined DNV in November 2005 as Auditor. Till date has experience of around 7.5 years in validation and verification of CDM/JI projects. For the last five to four years, holding the responsibility of Senior Manager (Technical) / (Operations), in addition to working on projects as either Team Leader or Technical Reviewer. As per the UNFCCC competency requirements, the industrial experience and project experience in CDM demonstrate sufficient sectoral competence in areas of (a) 1.1 Thermal energy generation from fossil fuels and Biomass as well as thermal electricity from solar (b) 1.2 Energy Generation from renewable energy sources (c) 5.1/4.13/11.1/12.1 Chemical Processes Industries and (d) 13.1 Waste handling and disposal.

Thamizharasi Kaliaperumal

Ms Thamizharasi Kaliaperumal holds a Bachelor of Technology Degree in Chemical Engineering. She has an overall experience of around five years in Chemical /Petrochemical processing industries (Technical Services & Energy Management) and CDM Consultancy altogether. Her main areas of work in Energy Management include Pinch analysis, Thermography survey, Analysis of Specific consumption of energy, Additive addition in fuel oil, Steam Traps audit for condensate return, Performance of energy & mass balance and Energy Audits in Chemical /Petrochemical industries. Her scope of work in Technical Services include Production support, Process Trouble shooting of Ammonia plant operation, especially for Primary & Secondary Reformers, Shift converter, CO₂ Absorption section and Synthesis Loop sections, Assessment of catalyst performance, Project feasibility studies (Carbon di-oxide recovery plant) and Management Information System.

She has completed ISO 50001:2011 - Energy Management System, Lead Auditor Program, certified by IRCA and ISO 14001:2004 - Environmental Management System Auditor / Lead Auditor Program, certified by IRCA and DNV Training Programme on Corporate GHG Inventory.

She has experience of more than 3 and half years in validation and verification of numerous CDM projects. Her qualification and industrial experience demonstrate her sufficient sectoral competence in areas of TA 1.2 Energy Generation from Renewable Energy Sources, TA 3.1

Energy Demand, TA 3.2 Household end use energy efficiency and TA 5.1/11.1/12.1 Chemical Processes Industries.

Krishnan Namboodiri

Mr Krishnan Namboodiri, Senior CDM Specialist, DNV Kochi, India. Holds graduate degree in chemical engineering and has done a short term diploma course in Management. Prior to joining DNV in 2008, has had 24 years of direct work experience in the fertilizer and chemicals industry. Work experience covers 5 years in process design & engineering for chemical industry 7 years in technical services including environment management activities, 7 years in project management and 5 years in training & corporate planning in fertilizer & petrochemical manufacturing units. Has been actively involved in Management System Audits as per ISO 14001 for more than 8 years.

The above work experience includes-(a) experience in steam system optimisation & trouble shooting , development of improvement schemes in large fertiliser & caprolactum complex (b) Design and engineering, efficiency studies and development of efficiency improvement schemes for fossil fuel fired steam & power generation plants (c) Implementation of energy saving measures in Ammonia plants, sulphuric acid plant etc (d) Monitoring, trouble shooting and development & implementation of improvement schemes for of pollution control facilities (chemical, aerobic & anaerobic treatment systems) in Fertiliser and petrochemical complex. Development & implementation of landfill facilities for solid and hazardous wastes from fertiliser & caprolactam manufacturing complex.

He has received extensive training in the CDM validation and verification process. He is an appointed GHG auditor for the CDM validation and verification program of DNV and has performed validation & verification and Technical Review of several CDM, VCS and GS projects in India and other countries.

His qualification, industrial experience and experience in CDM demonstrate his sufficient sectoral competence in (1) Thermal energy generation from fossil fuels as well as thermal electricity from solar and (2) waste handling and disposal. (3) Energy demand (4) Chemical process industries (5) Household end use energy efficiency and (6) Energy generation from renewable energy sources.