



# **VALIDATION REPORT**

## **PROGRAMME OF ACTIVITY**

# **STANDARD BANK MSW COMPOSTING PROGRAMME**

21 December 2012

**Japan Consulting Institute**

**REPORT No. JCI-CDM-VAL-11/172**

**REVISION No. 03**



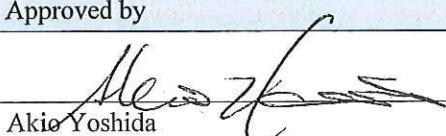
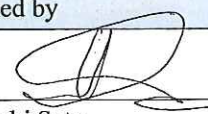
Validation Report No.	JCI CDM VAL-11/172
Date of revision	21 December 2012 Revision No. 03
Project name	Standard Bank MSW Composting Programme
Project Participant(s) / Organization	Standard Bank Plc (CME)
Host Country	Ghana
Project site Location	Kumasi City
Methodology	AM0025 Version 13.0.0
Scale	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale
Sectoral Scope/ Technical Area	Sectoral Scope :1, 13 / Technical Area: 1.1, 13.1
GHG reducing measure/ Technology	MSW collecting and composting
Emission Reduction estimated	(CPA-001) 27,889 t-CO <sub>2</sub> e / year (average)

Validation Team	Name
Team leader	Hideyuki Sato
Team member	Masaki Okada
Team member	Toshiaki Takeda

Technical Reviewer	Shigeo Aoki
--------------------	-------------

<b>Conclusion of validation</b>
<input checked="" type="checkbox"/> Positive opinion: JCI's opinion is that the proposed CDM project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the methodology. Hence, JCI provides a positive opinion and requests the registration of the proposed project as a CDM project activity.
<input type="checkbox"/> Negative opinion: JCI's opinion is that the proposed CDM project does not meet all relevant UNFCCC requirements for the CDM and all relevant host country criteria and the supportive evidences are not provided sufficiently. Hence, JCI will not provide a positive opinion and requests the registration of the proposed project as a CDM project activity.

- ☒ No distribution without permission from the Client or responsible organisational unit  
☐ Limited distribution  
☐ Unrestricted distribution

Approved by	Checked by
 Akio Yoshida Executive Director, JCI CDM Center	 Hideyuki Sato Evaluation Group Manager, JCI CDM Center

**Abbreviations**

Additionality tool	Tool for the demonstration and assessment of additionality (Version 06.1.0)
AM0025	AM0025 Version 13.0.0. Avoided emissions from organic waste through alternative waste treatment processes
BM	Build Margin
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CERs	Certified Emission Reductions
CM	Combined Margin
CME	Coordinating/ Managing Entity
CO <sub>2</sub>	Carbon dioxide
CPA	Component Project Activities
DDs	PoA-DD, CPA-DD
DNA	Designated National Authority
DOE	Designated Operational Entity
EA	Ecosur Afrique
EB	The CDM Executive Board under COP/MOP
Emissions from solid waste disposal sites	Methodological tool Emissions from solid waste disposal sites (Version 06.0.1)
EPA	Environmental Protection Agency of Ghana (ESIA report reviewer/approver)
ERPA	Emission Reduction Purchase Agreement
ESIA	Environmental and Social Impact Assessment
FSR	Feasibility Study Report
Ghana	Republic of Ghana
GHG	Greenhouse Gas
JCI	Japan Consulting Institute
KP	Kyoto Protocol
LoA	Letter of Approval
MSW	Municipal Solid Waste
OM	Operating Margin
PoA	Programme of Activities
PP	Project Participant
PoA Standard	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 02.1)
SBP	Standard Bank Plc
Tool emission factor	Tool to calculate the emission factor for an electricity system (Version 02.2.1)
Tool for composting	Methodological tool Project and leakage emissions from composting (Version 01.0.0)
Tool for project emissions	Tool to calculate baseline, project and/or leakage emissions from electricity consumption (Version 01)
UK	United Kingdom of Great Britain and Northern Ireland
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation, Verification Standard Version 03.0
ZL	Zoomlion Ghana Ltd

## **CONTENT**

<b>I. EXECUTIVE SUMMARY - VALIDATION OPINION .....</b>	<b>5</b>
<b>II. INTRODUCTION OF VALIDATION .....</b>	<b>5</b>
1. Objective of CDM validation .....	5
2. Validation approach .....	6
3. Means of validation .....	6
3.1 Corrective action requests, clarification requests and forward action requests .....	6
4. Global Stakeholder Consultation .....	7
<b>III. VALIDATION WORK .....</b>	<b>8</b>
1. Validation Team .....	8
2. Appointment certificate of the DOE's validation team member .....	8
3. Quality Control within the team of the validation process .....	8
4. Desk Review .....	9
5. Follow-up actions (Interviews with relevant stakeholders in the host country) .....	12
<b>IV. VALIDATION FINDINGS .....</b>	<b>13</b>
1. Approval and authorization .....	14
2. Modalities of Communication .....	14
3. Management System .....	14
4. PoA/CPA design document .....	17
5. Description of a PoA/CPAs .....	18
6. Additionality of a project activity .....	19
6.1 Demonstration of additionality of the PoA as a whole .....	19
6.2 Start date of a PoA/CPA .....	21
6.3 Identification of alternatives .....	22
6.4 Investment analysis .....	23
6.5 Barrier analysis .....	23
6.6 Common practice analysis .....	25
7. Eligibility criteria for inclusion of a CPA in the PoA .....	26
8. Application of the selected baseline and monitoring methodology .....	32
8.1 Application of multiple methodologies .....	32
8.2 Applicability of the selected baseline and monitoring methodology to the project activity .....	32
8.3 Boundary .....	35
8.4 Description of baseline scenario .....	37
8.5 Estimation of emission reductions of a generic CPA .....	38
8.6 Monitoring plan .....	43
9. Environmental impacts .....	45
10. Local stakeholder consultation .....	45

Appendix A: Validation Protocol

Appendix B: Certificate of Appointment of Validation Team

## I. EXECUTIVE SUMMARY - VALIDATION OPINION

Japan Consulting Institute (JCI) has performed a validation of the Standard Bank MSW Composting Programme, in Ghana. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The reviews of the design documentation and the subsequent follow-up interviews have been provided JCI with evidences to determine the fulfillment of stated criteria.

The host country is Republic of Ghana. Ghana country fulfills the participation criteria. Ghana has approved the PoA and authorized the project participants. The DNA from Ghana confirmed that the project assists in achieving sustainable development./2.1/

The project applies “AM0025 Avoided emissions from organic waste through alternative waste treatment processes”, Version 13.0.0/4.1/.

The total emission reductions from the first CPA (CPA001 Kumasi Composting Plant at Adagya) under the proposed PoA are estimated to be on the average 27,889 tCO<sub>2</sub>e per year over the 10 years crediting period. The estimated emission reduction has been checked based on the validation work and JCI considers all relevant assumptions for the above estimated emission reduction is appropriate. Adequate training and monitoring procedures have been implemented.

In summary, it is JCI’s validation conclusion that the PoA as described in the latest version of PoA-DD and CPA-DD (CPA001) meets all relevant UNFCCC requirements for PoA and the host country criteria and currently applies the baseline and monitoring methodology AM0025 “Avoided emissions from organic waste through alternative waste treatment processes”, Version 13.0.0/4.1/.

JCI thus provides a positive validation opinion and the requests for the registration of the proposed project as a PoA.

## II. INTRODUCTION OF VALIDATION

Standard Bank Plc has commissioned JCI to perform a validation of the “Standard Bank MSW Composting Programme” as the CDM PoA project in Ghana (hereafter called “the PoA”).

This report summarizes the findings of the validation of the PoA, performed on the basis of UNFCCC criteria for the CDM, 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 and the subsequent decisions by the CDM Executive Board.

### 1. Objective of CDM validation

The objective of the validation is to have an independent assessment of proposed project activities against the applicable CDM requirements as set out in decision 3/CMP.1, its annex and relevant decisions of the COP/MOP, on the basis of the project design documents (PoA-DD, CPA-DD).

In particular, the project’s baseline, monitoring plan, and the project’s compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria.

Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

## 2. Validation approach

The validation approach is to determine whether the proposed project activity complies with the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board and to assess the claims and assumptions made in the POA-DD (including generic CPA-DD), CPA-DD.

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

## 3. Means of validation

JCI applies the means of validation specified throughout the VVS and where appropriate standard auditing techniques, including, but not limited to:

- (a) Document review, involving:
  - (i) A review of data and information;
  - (ii) Cross checks between information provided in the PoA-DD, CPA-DD and information from sources other than those used, if available, the DOE's sectoral or local expertise and, if necessary, independent background investigations.
- (b) Follow-up actions (e.g. on-site visit and telephone or email interviews), including:
  - (i) Interviews with relevant stakeholders in the host country, personnel with knowledge of the project design and implementation;
  - (ii) Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted.
- (c) Reference to available information relating to projects or technologies similar to the proposed CDM project activity registered and under validation; and
- (d) Review, based on the approved methodology being applied, of the appropriateness of formulae and correctness of calculations.

### 3.1 Corrective action requests, clarification requests and forward action requests

If, during the validation of a project activity, JCI identifies issues that need to be further elaborated upon, researched or added to in order to confirm that the project activity meets the CDM requirements and can achieve credible emission reductions, JCI shall ensure that these issues are correctly identified, discussed and concluded in the validation report.

JCI shall raise a corrective action request (CAR) if one of the following occurs:

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

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

JCI shall raise a forward action request (FAR) during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not



relate to the CDM requirements for registration.

JCI shall resolve or “close out” CARs and CLs only if the project participants modify the project design, rectify the PoA-DD, CPA-DD or provide adequate additional explanations or evidence that satisfies the DOE’s concerns. If this is not done, the DOE shall not recommend the project activity for registration to the CDM Executive Board.

JCI shall report on all CARs, CLs and FARs in its validation report. This reporting shall be undertaken in a transparent and unambiguous manner that allows the reader to understand the nature of the issue raised the nature of the responses provided by the project participants, the means of validation of such responses and clear reference to any resulting changes in the PoA-DD, CPA-DD or supporting annexes.

The validation protocol consists of three tables. The different columns in these tables are described as followings.

### Validation protocol tables

Table 1: Requirements checklist on PoA-DD, Table 2: Requirements checklist on CPA-DD
<ul style="list-style-type: none"> <li>✧ Requirement (Checklist Question) : The various requirements in Table 1 and 2 are checklist questions the project should meet. The checklist is organised in different sections, following the logic of the latest VVS, the PoA-DD, CPA-DD Guidelines and the PoA-DD, CPA-DD templates. Each section is then further sub-divided.</li> <li>✧ Reference : Gives reference to documents where the checklist question or item is found. Paragraph No. of VVS is referred.</li> <li>✧ Check Comment : The column is used to elaborate and discuss the checklist question and/or the conformance to the question.</li> <li>✧ ID No. of CAR, CL and FAR : <ul style="list-style-type: none"> <li>· ID No. of <b>CAR</b>, <b>CL</b> and <b>FAR</b> is described.</li> <li>· Corrective Action Request (<b>CAR</b>) is used due to non-compliance with the checklist question.</li> <li>· Clarification Request (<b>CL</b>) is used when the validation team has identified a need for further clarification.</li> <li>· Forward Action Request (<b>FAR</b>) is used to highlight issues related to project implementation that require review during the first verification of the project activity.</li> </ul> </li> </ul>

Table 3: Resolution of Corrective Actions, Clarification Requests and Forward Action Requests
<ul style="list-style-type: none"> <li>✧ Clarifications and corrective action requests : If the conclusions from the draft Validation are a <b>CAR</b>, a <b>CL</b> or a <b>FAR</b>, these should be listed in this section.</li> <li>✧ Ref. to checklist question in Table1 and 2 : Reference to the checklist question number in Table1 and 2 where the <b>CAR</b>, <b>CL</b> or <b>FAR</b> is explained.</li> <li>✧ Summary of project owner response : The responses given by the project participants during the communications with the validation team should be summarised in this section.</li> <li>✧ Validation team conclusion : This section should summarise the validation team’s responses and final conclusions.</li> </ul>

## 4. Global Stakeholder Consultation

JCI made the PoA-DD, CPA-DD version 1.0 dated 12 April 2012/1.1/ of the project activity under consideration publicly available on UNFCCC website and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 25 April 2012 to 24 May 2012.

As a result of consultation, no comment was received during above 30 days period.

### III. VALIDATION WORK

JCI carried out the validation work to ensure that the project activity complies with the requirements of paragraph 37 of the CDM modalities and procedures

#### 1. Validation Team

Details of the validation team are shown in below Table.

Role/Qualification	Name	Qualified Technical Areas related to the Project	On-site Visit
All relevant issues / Team Leader	Hideyuki Sato	TA 1.1, TA 13.1	✓
CDM auditor / Team Member	Masaki Okada	TA 1.1, TA 13.1	
CDM auditor / Team Member	Toshiaki Takeda	TA 1.1, TA 13.1	

Details of the technical reviewer are shown in below Table.

Name	Qualified Technical Areas related to the Project
Shigeo Aoki	TA 1.1, TA 13.1

#### 2. Appointment certificate of the DOE's validation team member

The certificate of appointment of validation team member is attached in Appendix B to this report.

#### 3. Quality Control within the team of the validation process

The validation report worked out by the team underwent an internal review process for the assurance of being in compliance with the applicable requirement of the latest version of VVS.

JCI applies internally established Quality Management Program for the required review process, which is defined as follows;

- 1) Internal Review for the interim check by the internal audit team and the technical reviewer
- 2) The evaluation of the validation work in the CDM evaluation committee consists of outside experts
- 3) Internal review for the final check by the internal audit team and the technical reviewer

The review and evaluation including the technical review are implemented for every validation work by the competent personnel assigned in accordance with JCI's qualification scheme for CDM validation and verification.



## 4. Desk Review

Document review, involving:

- (i) Review of data and information to verify the correctness, credibility and interpretation of presented information;
- (ii) Cross checks between information provided in the PoA-DD, CPA-DD and information from sources other than that used, if available, and if necessary independent background investigations

The following table outlines the documentation reviewed during the validation:

### Documents list

No.	Title
<b>1.</b>	<b>&lt;DDs for POA and CPA&gt;</b>
1.1	PoA-DD for Standard Bank MSW Composting Programme, Version 1.0 dated 12/04/2012 (for GSC)
	CPA-DD for CPA001 Kumasi Composting Plant at Adagya version 1.0 dated 12/04/2012 (for GSC)
1.2	PoA-DD for Standard Bank MSW Composting Programme, Version 3.0 dated 20/12/2012 (for registration)
	CPA-DD for CPA001 Kumasi Composting Plant at Adagya version 3.0 dated 20/12/2012 (for registration)
<b>2.</b>	<b>&lt;Letter of Approval, permits&gt;</b>
2.1	Letter of Approval issued by DNA of Ghana on 16 September 2012
2.2	Modalities of Communication
<b>3.</b>	<b>&lt;Outline of the related entities &gt;</b>
3.1	Company profile of Standard Bank Plc as the Coordinating / Managing entity (CME) (website: <a href="http://www.standardbank.com/">http://www.standardbank.com/</a> )
3.2	Company Profile of Zoomlion Ghana Ltd as CPA implementer (website: <a href="http://www.zoomlionghana.com/">http://www.zoomlionghana.com/</a> ) and Overall Organization Chart of Zoomlion Ghana Ltd.
3.3	Company profile of ecosur afrique as CDM consultant (website: <a href="http://www.ecosurafrique.com/">http://www.ecosurafrique.com/</a> )
<b>4.</b>	<b>&lt;Referenced Documents (Methodologies, Tools, Guidelines, etc of UNFCCC&gt;</b>
4.1	AM0025 “Avoided emissions from organic waste through alternative waste treatment processes” (Version 13.0.0, EB65)
4.2	Project and leakage emissions from composting (Version 01.0.0, EB65, Annex 9)
4.3	Emissions from solid waste disposal sites (Version 06.0.1, EB66, Annex 46)
4.4	Tool to calculate the emission factor for an electricity system (Version 02.2.1, EB63, Annex 10)
4.5	“Tool to determine the mass flow of a greenhouse gas in gaseous stream” (Version 2.0.0, EB61, Annex 11).
4.6	Tool for the demonstration and assessment of additionality (Version 06.1.0, EB69, Annex 20)
4.7	Guideline on the demonstration and assessment of prior consideration of the CDM (Version 04.0, EB62, Annex 13)
4.8	Guidelines for demonstrating additionality of microscale project activities (Version 04.0, EB68, Annex 26)
4.9	Guidelines on additionality of first-of-its-kind project activities (Version 02.0, EB69, Annex 07)
4.10	Guidelines on the assessment of Investment Analysis (Version 05, EB62 Annex 05)
4.11	Guidelines on common practice (Version 02.0, EB69, Annex 08)
4.12	Guidelines for completing the programme design document form for CDM PoAs (Version 02.0, EB67, Annex 28)
4.13	Guidelines for completing the component project activity design document form (Version 01.0, EB66, Annex 16)
4.14	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 02.1, EB70, Annex 05)

No.	Title
4.15	CDM Validation and Verification Standard (Version 03.0, EB70, Annex 03)
4.16	CDM Project Standard (Version 02.0, EB70, Annex 02)
4.17	Processing and reporting on validation CDM Project Activities (Version 01.0, EB50, Annex 48)
4.18	Clean Development Mechanism Project Cycle Procedure (Version 03.0, EB70, Annex 04)
4.19	“F-CDM-MOC “Modalities of Communication Statement (Version 02.1)
4.20	Glossary of CDM terms (Version 07.0, EB70, Annex 07)
4.21	Tool to calculate baseline, project and/or leakage emissions from electricity consumption (Version 01, EB39, Annex 7)
<b>5.</b>	<b>&lt; Basic Reports for the Programme&gt;</b>
5.1	ESIA (Environmental and Social Impact Assessment) report issued June 2012
<b>6.</b>	<b>&lt; Related Codes, Regulations, Standards for Programme &gt;</b>
6.1	1. Factories, Offices and Shops Act of 1970 (Act 328). (1970)
6.2	2.Environmental Assessment Regulations, L.I. 1652 (1999)
6.3	3.Environmental Assessment Regulation (Amendment) L.I. 1703 (2002)
6.4	5. Ghana DNA. (2012). Sustainable Development Criteria for Approval of CDM Projects the DNA. Retrieved from Environmental Protection Agency (EPA)
6.5	11. Ministry of Local Government & Rural Development - EPA. (May 2002). Landfill Guidelines
6.6	12. Ministry of Local Government and Rural Development. (2010, 04). Environmental Sanitation policy (Revised 2010).
6.7	13. Ministry of Local Government and Rural Development. (2010, 10). National Environmental Sanitation Strategy and Action Plan 2010-2015
<b>7.</b>	<b>&lt; Published references &gt;</b>
7.1	4. CIA. (2012, February 21). Ghana. (C. I. Agency, Editor)
7.2	6. Government of Ghana. (2011, April). Savannah Accelerated Development Authority.
7.3	7. Government of Ghana. (2012, July 9). MEST Registers First Ever Clean Development Mechanism in Ghana.
7.4	8. Government of Ghana. (2011, 10 21). Non-Annex I national communications.
7.5	9. Honey-Collins, A.H. (2006). The Potential for Using Composted Municipal Waste in Agriculture, the case of Accra, Ghana.
7.6	10. Mensah, A., & Labia, E. (2005). FACT SHEET Solid Waste Disposal (SWD) in Ghana. Kumasi Metropolitan Assembly, Waste Management Department, Kumasi
7.8	14. Öberg, H. (2011, 08). A GIS-based Study of Sites for Decentralized Composting and Waste Sorting Stations in Kumasi, Ghana.
7.9	15. Oteng-Ababio, M. (2010, May 19). Missing links in solid waste management in the Greater Accra Metropolitan Area in Ghana. GeoJournal, 76(5), pp. 551-560.
7.10	16. Richard, T. L. (1993). Municipal Solid Waste Composting: Biological Processing.
7.11	17. Sustainable Sanitation Alliance c/o GIZ GmbH. (2011, 06) Compilation of 27 case studies on sustainable sanitation projects from Sub-Saharan Africa.
7.12	18. Thompson, I. A. (2010, 04). Domestic Waste Management in Accra, Ghana and Other Urban Cities in Tropical developing Nations.
7.13	19. Tribe, I. A., & Marbell, E. (2004). A look at urban waste disposal problems in Accra. Master's Thesis, Roskilde University, Roskilde.
7.14	20. United Nations Commission on Sustainable Development. (2010). National Report for Ghana- Waste management in Ghana.
7.15	21. World Bank. (2011, March 1). Tackling poverty in Northern Ghana.
	< Published references > in CPA-DD
7.16	Ohio-State-University. 2000. Carbon, nutrient and mass loss during composting.
7.17	Rockson, Georgesn, Kingsley ofori Ameyaw, Mizpah A. D. Asase. 2012. Case Study on the Production of Compost Using Solid Waste Technology and Management at Newmont Site in Ghana.

No.	Title
7.18	World Climate Weather station KUMASI
7.19	Energy Commission of Ghana. (2010). Energy Statistic
7.20	National Energy Statistics Report (2000-2010)
7.21	Accra compost and recycling plant issued by ACaRP dated 11 September 2012
<b>8.</b>	<b>&lt;Contract, Agreements for the first CPA &gt;</b>
8.1	Emission Reductions Purchase Agreement (ERPA) dated 26 March 2012 (Partially)
8.2	Purchase Contract of equipment dated 29 June 2012
8.3	Purchase Contract of construction dated 29 June 2012
<b>9.</b>	<b>&lt; Excel spread sheet for the calculation by PP &gt;</b>
9.1	Excel spread sheet for estimation of ERs calculation for CPA001
9.2	Excel spread sheet for Ghana Power plan statistics data July 2012
9.3	Excel spread sheet for estimation of Ghana Grid EF 05 July 2012
<b>10.</b>	<b>&lt; Documentary evidences, Records for the Project &gt;</b>
10.1	On-site summary report by JCI
10.2	Letter from EPA regarding Zoomlion Ghana Ltd's EIA – 20th September 2012
<b>11.</b>	<b>&lt; Monitoring Plan&gt;</b>
11.1	CDM Monitoring Manual for Standard Bank as the Coordinating Managing Entity (Described in the Section C of PoA-DD)
11.2	Managing system for the collection of records, data, and reporting for Zoomlion Ghana Ltd as implementer of CPA (Described in the Section C of PoA-DD)
<b>12.</b>	<b>&lt; Records related to stakeholder for Project&gt;</b>
12.1	Minutes of Meeting with local stakeholders

Main changes in the PoA, CPA-DD between the versions published/1.1/ for the 30 days stakeholder commenting period and the final version/1.2/ submitted for registration are summarized in the table below:

Subject and section in the PoA-DD	Original content in the PoA-DD/1.1/	Revised content in the PoA-DD/1.2/	Issued CAR or CL Relevant tool, guidance, or guidelines applied
LoAs	Host country: Ghana Annex I: UK	Unilateral CDM project Only Ghana LoA	CAR-1
Project boundary Section B.5.	Landfill site was not included in the project boundary.	Landfill site has been included in the project boundary.	CAR-3 AM0025/4.1/
Eligibility criteria Section B.2.	Eligibility criteria were not sufficiently demonstrated.	Eligibility criteria have been sufficiently demonstrated.	CL-6 “PoA Standard”/4.14/
Management system Section C.	Management system of CME was not sufficiently described.	Management system of CME has been sufficiently described.	CL-7 “PoA Standard”/4.14/
PoA starting date	01/10/2012	25/04/2012	CL-10
Calculation of grid emission factor Appendix 4	Base data is from 2007 to 2009	Base data was changed from 2007-2009 to 2008-2010.	CL-15

<b>Subject and section in the CPA-DD</b>	<b>Original content in the CPA-DD/1.1/</b>	<b>Revised content in the CPA-DD/1.2/</b>	<b>Issued CAR or CL Relevant tool, guidance, or guidelines applied</b>
CPA starting date Section A.8.1.	20/04/2012	29/06/2012	CAR-1
Estimated amount of GHG emission reductions Section A.10.	27,670 tCO <sub>2</sub> e/y	27,889 tCO <sub>2</sub> e/y	CL-16, CL-17 ESIA report/5.1/
Project boundary Section D.3.	Landfill site was not included in the project boundary.	Landfill site has been included in the project boundary.	CAR-3 AM0025
Eligibility criteria Section D.5.	Eligibility criteria were not sufficiently demonstrated.	Eligibility criteria have been sufficiently demonstrated.	CL-3 “PoA Standard”/4.14/
Common practice Section D.5.	First of its kind was not appropriately demonstrated.	First of its kind has been appropriately demonstrated.	CL-8

## **5. Follow-up actions (Interviews with relevant stakeholders in the host country)**

The on-site visit and interviews with project stakeholder were held from 18 to 19 and 25 June 2012 at the project site in Kumasi city, Accra city, Ghana by Hideyuki SATO/Team Leader.  
The names of interviewees are listed below.

### List of interviewees

Ref. No.	Date	Organization/ Attendance	Topics
/10.1/	2012/6/18	<b>Zoomlion Ghana Ltd (ZL)</b> (CPA001 Implementer): Ms. Rachel Ofori Asantewaa Mr. Isaac S-lase Kuwornu  <b>Ecosur Afrique (EA)</b> (CDM Consultant & PoA, CPA-DD Author) Mr. Jean-Félicien Banny	<ul style="list-style-type: none"> <li>➤ Meeting with ZL and EA in ZL's office</li> <li>➤ Introduction of JCI</li> <li>➤ Introduction of ZL and EA and the Project</li> <li>➤ Discussion with ZL and EA on the project timeline and documents to be assessed based on the Documents List prepared by JCI</li> </ul>
/10.1/	2012/6/19	<b>Standard Bank Plc (SBP)</b> (CME): Mr. Bernard Gakuha  <b>Zoomlion Ghana Ltd (ZL)</b> (CPA001 Implementer): Ms. Rachel Ofori Asantewaa Mr. Isaac S-lase Kuwornu  <b>Ecosur Afrique (EA)</b> (CDM Consultant & PoA, CPA-DD Author) Mr. Jean-Félicien Banny  <b>Local stakeholders</b> 8 persons	<ul style="list-style-type: none"> <li>➤ Introduction of SBP</li> <li>➤ Discussion with SBP, ZL and EA on initial findings, review of POA, CPA-DD, comments and document proofs</li> <li>➤ The project site survey</li> <li>➤ Interview with local stakeholders and residents</li> <li>➤ Discussion about future activities</li> <li>➤ Closing meeting</li> </ul>
/10.1/	2012/6/25	<b>Ministry of Environment Science &amp; Technology (DNA)</b> Ms. Eunice A. Asante  <b>Environmental Protection Agency in Accra (EPA)</b> Ms. Doris Abor  <b>Ecosur Afrique (EA)</b> (CDM Consultant & PoA, CPA-DD Author) Mr. Jean-Félicien Banny	<ul style="list-style-type: none"> <li>➤ Interview with DNA</li> <li>➤ Interview with EPA</li> </ul>

## IV. 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 project design as documented and described in the revised and resubmitted project design documentation (PoA-DD, CPA-DD)/1.2/.

### Findings issued through the validation

JCI issued seven (7) CARs, thirty three (33) CLs and zero (0) FAR as shown in the Validation Protocol, Appendix A of this report. All CARs and CLs were resolved and then closed as shown in the Table 3 of the Appendix A.

Major issues and its resolution process through the CARs and CLs are described in following items according to VVS /4.15/.

## **1. Approval and authorization**

### **1) Approval**

JCI received the copy of the LoA of the Ghana DNA issued on 16 September 2012 /2.1/ from the CME.

JCI has confirmed the approval of the project activity with the website of Ghana government related organization.

JCI also has confirmed the following:

1. The LoA/2.1/ confirms that Ghana is Party of the Kyoto Protocol.
2. With the LoA, the DNA of Ghana approved Standard Bank MSW Composting Programme and authorized Standard Bank Plc as a voluntary participant to the project, and addressed its assistance to sustainable development in the host country.

No evidence has been found during the validation process that the project uses any official development assistance funding for Ghana.

JCI concluded that the LoA is credible, authentic and fully comply with the CDM requirements.

### **2) Authorization**

JCI confirmed that the project participant-and coordinating/management entity is Standard Bank Plc of UK as being listed in tabular form in section A.3 of the PoA-DD /1.2/, and also confirmed that this information is consistent with the contact details provided in Annex 1 of the PoA-DD /1.2/. It is also confirmed that no entities other than those approved as project participants are included in these sections of the PoA-DD /1.2/.

As described above, the project participant is authorized with the LoA issued by the relevant DNA as a voluntary participant to the programme of activity.

### **3) Contribution to sustainable development**

JCI confirmed that the DNA of Ghana has confirmed the contribution of the project to the sustainable development of Ghana due to the Ghana LoA's statement and also interview with Ghana DNA.

## **2. Modalities of Communication**

JCI validated the written confirmation of the MoC submitted from the CME with whom JCI has a contractual relationship in accordance with VVS para. 54 (c) and the official who submit the MoC statement to JCI and official who signed the written confirmation is duly authorized to do so on behalf of the respective CME.

Therefore, JCI confirmed in writing that the MoC statement/2.2/ is in accordance with the requirements established in VVS and complies with all relevant forms/4.19/ and requirements.

## **3. Management System**

### **1) Coordinating/managing entity and participants in a PoA**



JCI confirmed that Standard Bank Plc is a coordinating/management entity (CME) and project participant for the PoA, which is described in Section A.3. of the PoA-DD/1.2/.

JCI issued CL-7 to request to demonstrate the management system in accordance with “PoA Standard”/4.14/.

JCI validated and concluded that the management system of CME in the PoA meets all requirements of Paragraph 17 of “PoA Standard”/4.14/as described in Table IV-1.

**Table IV-1 Check for management system development and implementation by CME in the PoA**

Management system of CME to ensure the eligibility criteria for inclusion of CPAs	Description in PoA-DD	Check result
(a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;	<ul style="list-style-type: none"> <li>➤ recruiting CPA implementers;</li> <li>➤ ensuring that the proposed CPA is in compliance with PoA eligibility criteria;</li> <li>➤ write the present PoA-DD and CPA-DD through service agreements with CDM consultants;</li> <li>➤ collecting documents and supporting evidence required for PoA-DD and CPA-DD validation;</li> <li>➤ communicating with the Ghana DNA and the CDM Executive Board;</li> <li>➤ hiring DOE to conduct validation and verification;</li> <li>➤ finding CERs buyers and distributing CERs revenues to CPA implementers;</li> <li>➤ implementing a monitoring database;</li> <li>➤ training of personnel;</li> <li>➤ collecting periodically monitoring data;</li> <li>➤ preparing the monitoring reports</li> </ul>	OK Confirmed by interview with CME at the on-site assessment.
(b) Records of arrangements for training and capacity development for personnel;	The competencies of the members of the compliance team remain current, training and capacity development records in which all instruction sessions and workshops related to CDM procedures and project management shall be established.	OK Confirmed appropriateness in the PoA-DD
(c) Procedures for technical review of inclusion of CPAs;	1. Verify that all eligibility criteria for inclusion in the PoA are met.	OK Confirmed appropriateness

Management system of CME to ensure the eligibility criteria for inclusion of CPAs	Description in PoA-DD	Check result
	2. Check the procedure to avoid double counting. 3. Check if ESIA has been undertaken (if required). 4. Check if stakeholder consultation has been undertaken (if required). 5. Check if all supporting documentation quoted in PoA-DD is in accordance with CPA details. 6. Complete all the sections of the CPA-DD. 7. Reviewer shall check emission reduction calculation. 8. The person responsible shall seek CME and PoA manager approval for the draft CPA-DD. 9. Delivery of approval and contact agreement for CPA inclusion. 10. A DOE is contracted. 11. CPA-DD is submitted to the DOE. 12. CARs & CLRs closed. 13. The inclusion of the CPA in the PoA is confirmed. .	in the PoA-DD
(d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);	The procedure is described in Table 3 in the PoA-DD.	OK Confirmed appropriateness in the PoA-DD
(e) Records and documentation control process for each CPA under the PoA;	The CME will establish and maintain a database for each CPA. The CME will record CPA information detail delivered by CPA implementer, as follows: - Name of the CPA, - Name of CPA implementer, - Contact details of CPA implementer, - Capacity of the composting plant and other relevant technical specifications of each CPA, - GPS coordinates of each CPA, - Verification status (number of verification and associated monitoring period),	OK Confirmed appropriateness in the PoA-DD

Management system of CME to ensure the eligibility criteria for inclusion of CPAs	Description in PoA-DD	Check result
	- Emission reductions monitored and issued each monitoring period.	
(f) Measures for continuous improvements of the PoA management system;	<ul style="list-style-type: none"> <li>• Internal audits</li> <li>• A review of the previous period and the latest developments,</li> <li>• Recurring issues related to the inclusion process,</li> <li>• Comments provided by the members of the compliance team and CME,</li> <li>• Feedback from the CPA implementers,</li> <li>• Potential improvements to be implemented for the next period.</li> </ul>	OK Confirmed appropriateness in the PoA-DD
(g) Any other relevant elements.	NA	NA

From the above Table, JCI confirmed the followings through the document review and the interviews with the person responsible of the PoA project from the SBP as CME;

- ① The CME have demonstrated that compliance with the additionality-related eligibility criteria set in the PoA design document will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.
- ② The CME have developed eligibility criteria for inclusion of a CPA under the PoA and shall include these criteria in the PoA-DD and demonstrate their usability to assess the inclusion of CPAs in the PoA-DD.
- ③ The CME have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.

## 2) Entity/individual responsible for CPA

JCI confirmed that the CPA implementer of CPA001 Kumasi Composting Plant at Adagya is Zoomlion Ghana Ltd who is not a project participant of the PoA. It is listed in Section A.6. of CPA-DD.

## 4. PoA/CPA design document

### 1) PoA design document and CPA design document

Through desk reviews and Q&A sessions with the PoA-DD, CPA-DD author, JCI confirmed that the PoA-DD, CPA-DD/1.2/are described based on and referring to the following relevant tools, guidance, guidelines, and manual:

- (1) AM0025 “Avoided emissions from organic waste through alternative waste treatment processes” (Version 13.0.0) /4.1/
- (2) Project and leakage emissions from composting (Version 01.0.0) /4.2/
- (3) Emissions from solid waste disposal sites (Version 06.0.1) /4.3/
- (4) Tool to calculate the emission factor for an electricity system (Version 02.2.1) /4.4/
- (5) Tool to determine the mass flow of a greenhouse gas in gaseous stream (Version 2.0.0). /4.5/

- (6) Tool for the demonstration and assessment of additionality (Version 06.1.0) /4.6/
- (7) Tool to calculate baseline, project and/or leakage emissions from electricity consumption (Version 01) /4.21/
- (8) Guideline on the demonstration and assessment of prior consideration of the CDM (Version 04.0) /4.7/
- (9) Guidelines for demonstrating additionality of microscale project activities (Version 04.0) /4.8/
- (10) Guidelines on additionality of first-of-its-kind project activities (Version 02.0) /4.9/
- (11) Guidelines on the assessment of Investment Analysis (Version 05) /4.10/
- (12) Guidelines on common practice (Version 02.0) /4.11/
- (13) Guidelines for completing the programme design document form for CDM PoAs (Version 02.0) /4.12/
- (14) Guidelines for completing the component project activity design document form (Version 01.0) /4.13/
- (15) Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 02.1) /4.14/
- (16) CDM Validation and Verification Standard (Version 03.0) /4.15/
- (17) CDM Project Standard (Version 02.0) /4.16/
- (18) Processing and reporting on validation CDM Project Activities (Version 01.0) /4.17/
- (19) Clean Development Mechanism Project Cycle Procedure (Version 03.0) /4.18/
- (20) Glossary of CDM terms (Version 07.0) /4.20/

The project design was described using the latest PROGRAMME DESIGN DOCUMENT FORM FOR CDM PoAs (F-CDM PoA-DD) Version 02.0 as shown in the PoA-DD /1.2/ and COMPONENT PROJECT ACTIVITY DESIGN DOCUMENT FORM (F-CDM-CPA-DD) Version 02.0 as shown in the CPA-DD/1.2/, which were confirmed through comparison with the template listed on the UNFCCC website.

As described above, JCI confirmed that the PoA-DD, CPA-DD /1.2/ are compiled with use of the appropriate format and is described based on appropriate tools, guidelines, manual and guidance which are specified and requested by the CDM procedures.

## **5. Description of a PoA/CPAs**

- 1) JCI confirmed the accuracy and completeness of the project description based on the following process.**

- (1) Desk review**

Desk review on PoA-DD and CPA-DD was carried out before and after the on-site assessment. Document review: Findings (CARs, CLs) on PoA-DD and CPA-DD/1.2/, ESIA report /5.1/, contracts/agreements for the first CPA /8.1/, /8.2/, /8.3/, published references and Internet websites information /7.1/~7.21/, relevant laws/regulations/codes /6.1/~6.7/, and other relevant information /3.1/~3.3/, /12.1/ etc.

- (2) On-site assessment**

The contexts of the PoA-DD, CPA-DD /1.2/ were checked during the on-site assessment conducted from 18 to 19 and 25 June 2012 with the following measures:

- ① Observation of the project site
- ② Cross-check of the construction work with relevant documents provided by the project participant /5.1/, /8.2/, /8.3/
- ③ Interviews with the project participant, relevant organizations/entities, and local stakeholders shown in Table of section III-5 above and in on-site assessment report /10.1/.

As the result of the above process, JCI validated and concluded that the descriptions of the PoA-DD, CPA-DD /1.2/ are correct and its context is sufficient, and well outlines the nature and technical aspects of the project activity.

## 2) Description of the PoA

The major features of the PoA as observed during the site visit and described in the PoA-DD /1.2/ are summarized below.

- ♦ The PoA aims to promote and support the improvement of waste management practice in Ghana, through the development and operation of Municipal Solid Waste (MSW) sorting and composting plants. The organic fraction of the waste will be recovered into saleable compost for agricultural, horticultural and landscaping activities.
- ♦ Start date of the PoA: 01 January 2013
- ♦ Length of the PoA: 28 years

All composting activities in the CPAs included in this PoA will be installed within the borders of Ghana.

JCI confirms prospected potentials for composting in Ghana /7.4/, /7.6/, /6.7/.

Standard Bank Plc acts as the CME for the PoA, and provides an open platform for different technology and service suppliers to participate in the PoA by developing their own Component project activities (CPAs).

## 3) Description of the CPA

- ♦ CPA001 consists in the installation and operation of state-of-the art Municipal Solid Waste (MSW) composting plant at Adagya in Kumasi Metropolitan Assembly (Ashanti Region). The organic fraction of the MSW will be recovered into saleable compost for agricultural, horticultural and landscaping activities.
- ♦ Sorting and composting plant capacity: 600 tonnes/day as per /8.2/, /8.3/
- ♦ Emission reductions: 27,889 t-CO<sub>2</sub>e/y
- ♦ Start date of the CPA001: 29 June 2012
- ♦ Project Operational Lifetime: 20 years as per /8.2/, /8.3/
- ♦ Start date of crediting period: 01 April 2013
- ♦ Crediting period: 10 years (fixed)

## 6. Additionality of a project activity

### 6.1 Demonstration of additionality of the PoA as a whole

The PoA consists of large scale, small scale and micro scale projects as CPAs and includes eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies according to “Tool for the demonstration and assessment of additionality”/4.6/, which is also applied for small scale projects from 20,000 to 60,000 tCO<sub>2</sub>/year, and of the micro scale projects according to “Guidelines for demonstrating additionality of microscale project activities”/4.8/.

According to the PoA Standard /4.14/, demonstration of additionality is required to comply with following requirements as summarized in the below Table.

Check for additionality conditions as PoA.

	<b>Requirements</b>	<b>PoA-DD</b>	<b>Check result</b>
1	<u>(Para 7. of the Standard)</u> Additionality shall be demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur.	Depending on project-specific circumstances, identification of alternatives is to be performed at CPA level as well as investment or barriers analysis and common practice analysis if applicable.	<b>OK</b> Confirmed the additionality tool shall be applied for all projects (large scale and small scale) except for micro scale projects for which the additionality guidelines of microscale projects (para.4 (a)) can be applied for additionality demonstration.
2	<u>(Para 8. of the Standard)</u> PoAs that consist of one or more microscale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the “Guidelines for demonstrating additionality of microscale project activities”	In case the PoA consist of one or more microscale projects as CPAs, the eligibility criteria in PoA-DD covers all the relevant requirements of the “Guidelines for demonstrating additionality of microscale project activities”/4.8/	<b>OK</b> Confirmed the Guideline to be applied for microscale projects of CPAs.
3	<u>(Para 9. of the Standard)</u> PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the “Guidelines for demonstrating additionality of small scale project activities”.	As the PoA applies only large scale methodology (AM0025), additionality guidelines of small scale projects cannot be applied.	<b>OK</b> Confirmed the additionality guidelines of small-scale projects cannot be applied for CPAs.
4	<u>(Para 10. of the Standard)</u> PoAs that consist of one or more large scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies.	In case the PoA will consist of large scale projects as CPAs, the eligibility criteria in PoA-DD covers all the relevant requirements of the ” Tool for the demonstration and assessment of additionality”/4.6/	<b>OK</b> Confirmed the Tool to be applied for large scale projects of CPAs
5	<u>(Para 11. of the Standard)</u> The CME shall demonstrate that compliance with the additionality-related eligibility criteria set in the PoA design document will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.	In case the PoA will consist of microscale and/or large scale projects as CPAs, the eligibility criteria in PoA-DD covers all the relevant requirements on additionality in related Guidelines and Tool.	<b>OK</b> Confirmed the Guideline and Tool to be applied for various scale projects of CPA
6	<u>(Para 12. of the Standard)</u> For PoAs involving combinations of technologies/measures and/or methodologies, the eligibility criteria relative to each of them shall be proposed to demonstrate additionality. Types of combinations as indicated in paragraph 29(a) to 29(d) below shall be taken into	Not applicable.  As the PoA will be applied only the composting plant in AM0025, combinations of technologies/measures and/or methodologies are not applied.	<b>OK</b> Confirmed that the combination case will not be applied



account		
---------	--	--

At PoA level, relevant barriers faced to the projects are outlined as below.

JCI confirmed that composting projects faced to the various barriers in the Ghana through the referenced published reports: investment barrier /7.14/, /7.6/, technological barrier /7.9/ and barrier due to prevailing practice /7.3/, /7.5/, /7.11/, /7.13/, /7.14/.

As summarized in the above Table, the PoA will consist of one or more microscale projects, small scale or large scale projects as CPAs, demonstration of additionality shall be conducted at CPA level taking the following action or steps according to the Guidelines or Tool.

- 1) In case the CPA is microscale projects (<20ktCO<sub>2</sub>)
 

*“Guidelines for demonstrating additionality of microscale project activities” Version 04.0, EB68 Annex 13 /4.8/* to be applied according to the Paragraph 6., although the project applies the large scale methodology ACM0025 /4.1/.

Following cases will be applied for this PoA “Standard Bank MSW Composting Programme”

  - a) if the condition below (para.4 (a)) is satisfied, CPA project can be considered to be additional automatically.
    - o The geographic location of the project activity is in one of the least developed countries or the small island developing States (LDCs/SIDS) or in a special underdeveloped zone (SUZ) of the host country.
  - b) if the condition above is not satisfied, additionality of the CPA project shall be demonstrated according to the “Tool for the demonstration and assessment of additionality”/4.6/.
- 2) In all other cases (large scale and small scale projects)
 

*“Tool for the demonstration and assessment of additionality” /4.6/* to be applied, accordingly, following steps shall be taken to demonstrate the additionality in CPA-DD.

  - a. Identification of alternatives
  - b. Investment Analysis
  - c. Barrier Analysis
    - Access-to-Finance Barriers
    - Technological Barriers
    - Lack of Prevailing Practice
  - d. Common Practice Analysis

The additionality of each CPA using one of the above analyses to be conducted in the CPA-DD section D.5 Demonstration of eligibility for the CPA.

Thus, JCI validated and concluded that the additionality of this PoA project “Standard Bank MSW Composting” as a whole is reasonable and appropriate in accordance with methodology AM0025/4.1/, relevant guidelines and the additionality tool /4.6/.

## 6.2 Start date of a PoA/CPA

### 1) PoA start date

JCI has made the PoA-DD/CPA-DD of “Standard Bank MSW Composting Programme” publicly available for GSC (Global Stakeholder Consultation) on 25 April 2012.

JCI validated and confirmed that 25 April 2012 of the start date in the PoA-DD/1.2/, which is the date of publication of the PoA-DD/CPA-DD for GSC (Global Stakeholder Consultation), is appropriate according to Glossary of CDM terms (Version 07.0)/4.20/.

### 2) CPA001 start date

JCI validated and confirmed that 29 June 2012 of the start date in CPA001 is earliest date at which either the implementation or construction or real action of CPA001 begins, (which is the date for the purchase contracts of equipment and construction/8.2/, /8.3/) and the date is after 25 April 2012 of the start date of the PoA.

### 6.3 Identification of alternatives

The following three alternatives of the PoA were identified as realistic and credible alternatives available to the project participants or similar project developers that provide outputs or services comparable with the proposed CDM project activity (disposal/treatment of the fresh waste).

Energy is not exported to a grid and/or to a nearby industry, therefore, alternatives for power and heat generation are not needed to consider;

M1: The project activity (i.e. composting) not implemented as a CDM project;

M2: Disposal of the waste at a landfill where landfill gas captured is flared;

M3: Disposal of the waste on a landfill without the capture of landfill gas (i.e. continuation of the current situation);

Assessment of the potential waste management alternatives shall be done at CPA level.

#### Assessment of the potential waste management alternatives regarding CPA001

##### M1. The project activity (i.e. composting) not implemented as a CDM project;

M1 is not a realistic scenario because of the high investment required and the technical complexity of the project. To date no similar investment has been done for waste treatment in the country, except the Project developer's own similar initiative currently implemented in Adjen Kotoku (Greater Accra Region) under the CDM scheme. Local banks are missing liquidity and expertise to assess such projects. The assessment capacity is key as the technology is completely new in the country. The risk is thus reinforced and the fund raising process even harder. Without the CDM benefits, the Project developer would not have enough financial capacity to develop the project.

Therefore, JCI validated and concluded that M1 scenario would not implemented without a CDM benefit.

##### M2. Disposal of the waste at a landfill where landfill gas captured is flared;

Landfill gas capture and destruction facilities are not existent in Ghana, as confirmed by UN SD 2010 commission, and of the rare LFG project ideas under consideration, none has made satisfying progress, although all envisaged under the CDM benefits.

This can be explained by several reasons:

- (i) No regulation to enforce landfill methane recovery, even for safety and odour concerns;
- (ii) Lack of financial resources and expertise to purchase, install and operate such installation;
- (iii) Technical constraints due to the landfills configuration (they were not planned to implement methane recovery projects and the situation today is quite too chaotic to install such equipment)
- (iv) Several LFG technology provider or project developers won't accept to sell or work in Ghana as they favour more stable and profitable markets (India, Mexico, China, etc.).

Therefore, JCI validated and concluded that M2 scenario is not a realistic scenario.

M3. Disposal of the waste on a landfill without the capture of landfill gas (i.e. continuation of the current situation);

JCI validated and concluded that M3 scenario is baseline scenario due to current practice of Solid Waste Management for Ghana including Kumasi through interview with EPA/10.1/, review of applicable laws/regulations/6.5/~6.7/ and bibliographic evidence /7.3/, /7.4/, /7.6/, /7.8/, /7.14/

## 6.4 Investment analysis

PoA-DD (Part II) states that in case the investment analysis is applied, the following Sub-steps shall be used.

- Determine appropriate analysis method  
Benchmark analysis or investment comparison analysis if justified is used.
- Apply Benchmark analysis  
The investment analysis should preferably be performed by using project IRR as the financial/economic most suitable for the project type and decision-making context.
- Calculation and comparison of financial indication  
Project IRR shall be calculated as the discount rate that makes the net present value of the future after tax cash flows equal the investment outlay.
- Sensitivity analysis  
After the demonstration of the base case IRR, a sensitivity analysis shall be done by monetary parameters.

JCI validated and concluded that the above investment analysis to demonstrate additionality is appropriate for CPAs.

Choice between investment analysis and/or barrier analysis is done at CPA level.

Investment analysis is not chosen for CPA001.

## 6.5 Barrier analysis

Choice between investment analysis and/or barrier analysis is done at CPA level. However, several barriers face by project developers who intend developing composting projects in Ghana are provided in section B.1 of the PoA.

### 6.5.1 Micro scale projects

Para. 4 of Guidelines for demonstrating additionality of microscale project activities/4.8/ states "*Other project activities not included in para. 2 or para.3 above, i.e. Type III project activities that aim to achieve emission reductions at scale of no more than 20 ktCO<sub>2</sub>e per year, are additional if any one of the following conditions ((a) and (b) of para.4) is satisfied*"

Therefore, if a CPA satisfies the para.4, the CPA is additional.

In this case barrier analysis is not required.

Even if a CPA is Type III project activities that aim to achieve emission reductions at scale of no more than 20 ktCO<sub>2</sub>e per year, if the CPA don't satisfy the para.4, additionality demonstration of the CPA shall be conducted by using "Tool for demonstration of additionality".

JCI confirmed it is appropriate to demonstrate additionality for microscale projects for CPAs.

This is not applicable for CPA001, because CPA001 is a large scale project.

### **6.5.2 All other projects (small scale and large scale projects)**

PoA-DD (Part II) states that in case of all other projects the following three (3) categories of barrier shall be demonstrated according to the “Tool for the demonstration and assessment of additionality”/4.6/ for CPAs.

The three categories of barriers:

- 1) Investment Barriers,
- 2) Technological Barriers
- 3) Barriers due to Prevailing Practice

JCI validated and concluded that for all projects the above three (3) categories of barrier on barrier analysis are appropriate to demonstrate the additionality for CPAs (but barrier analysis is not required for micro-scale projects that apply the micro-scale guidelines)."

In case of CPA001, the below three categories are demonstrated;

- 1) Investment barrier

Composting plants require an intensive capital investment and a long-term financing, proportional to the risks associated with this kind of investment. Specific technical difficulties for construction and operation at the site of the project, and lack of significant experience and feedback in composting programs made it difficult to obtain local financing. These barriers are described by the GOAN in a fact-sheet of November 2005/7.6/ and their coordinator has confirmed them as still accurate.

#### Absence of regulation and incentives for composting initiatives

JCI confirmed that there is no regulation to conduct a composting project for waste treatment in Ghana. The absence of regulation and incentives for capital-intensive composting projects affects the attractiveness of the proposed project activity without CDM: it is deemed insufficient given the established lack of state support and funding for waste management services, low compost benefits awareness and willingness. These barriers are described by the GOAN (Ghana Organic Agriculture Network) in a fact-sheet of November 2005/7.6/ and their coordinator has confirmed them as still accurate.

JCI confirmed that it is described in the fact-sheet that GOAN promotes compost as an option for solid waste management. However, there is low demand for compost and financial sustainability for composting is difficult to attain. The problems with financial sustainability are attributed to: (i) lack of awareness about the soil enriching benefits of compost which means there is little demand for compost and (ii) lack of support from the key agencies who could do most to promote it i.e. the Ministry of Local Government (who are responsible for waste management) and the Ministry of Food and Agriculture (MOFA).

Furthermore, JCI confirmed that it was reported in the 18<sup>th</sup> session of the UN SD 2010 (United Nations Commission on Sustainable Development)/7.14/ that there has been a general reluctance by District Assemblies and the private sector to invest directly in waste infrastructure in Ghana.

As mentioned above, JCI validated and concluded that the barrier analysis is credible and the project faces investment barrier for the project without CDM incentive.

- 2) Technological barrier

The implementation of compost activities will be likely to face a series of technology barriers, as the pioneer character of Composting Plants requires state-of-the-art technologies and capabilities to be imported from overseas (unavailability of the technology in the region, and lack of skilled and/or properly trained labor to operate and maintain the technology).

Former public pilot project/7.9/ notwithstanding their modest installed capacity, were abandoned due to constant mechanical failure, equipment breakdown and lack of operational maintenance and as well as the production of low quality compost to market for revenue generation.

#### Unavailability of the technology in the region and lack of the skill

During the on-site assessment, JCI confirmed that the former public pilot project of the first composting project for MSW in Ghana established in 1979 was abandoned due to constant mechanical failure, equipment breakdown and lack of operational maintenance and as well as the production of low quality compost and has now become a dumpsite/7.9/.

As mentioned above, JCI validated and concluded that the project faces technological barrier due to lack of skill in Ghana.

#### 3) Barrier due to prevailing practice

Landfill is the prevailing practice of waste treatment in Ghana/6.2/. Accra for instance, with an estimated population of 3 million generates about 1,500 tons of solid waste per day of which only 55% is collected and disposed of.

JCI confirmed that there is no composting project for MSW in Ghana excluding the above former public pilot plant, and confirmed it becomes dumping site at the on-site assessment. Furthermore, JCI crosschecked by public literature/7.10/ in which it is described “The only official waste treatment facility, the Teshie Compost Plant, was established in 1979. However, due to lack of electricity, water and other technical problems, it has operated below 10% of its annual installed capacity of 3,800 tonnes and has now become a dump-site.”

Recently, “ZOOMLION GHANA LTD Composting of Municipal Solid Waste in Accra area” in Ghana has been registered as a CDM on April 2012, which the commercial operation will be expected to start from October 2012 at the earliest/7.21/ after 29 June 2012 of the start date of CPA001.

Therefore, it was confirmed that the CPA001 is the first in the applicable geographical area Ghana that applies a technology that is different from any other technologies able to deliver the same output and that have started commercial operation in the applicable geographical area Ghana before the start date of CPA001, it was also confirmed by interview with DNA of Ghana.

JCI validated and concluded that CPA001 faces the above three barriers, investment barriers, technological barriers and prevailing practice barriers.

JCI validated and concluded that the barrier analysis to demonstrate additionality for large scale projects and microscale projects is appropriately defined in the PoA-DD for CPAs.

## 6.6 Common practice analysis

In case of microscale project applied para.4 (a) of microscale additionality guidelines/4.8/, common practice analysis is not required.

In all other cases, common practice analysis shall be demonstrated according to the “Tool for the demonstration and assessment of additionality”.

JCI confirmed this is appropriate to analyse common practice for CPAs.

### **In case of CPA001**

Based on the above barrier analysis, JCI confirmed that there is no other activities in Ghana that are operational and similar to the proposed CPA001, except under the CDM scheme (“ZOOMLION GHANA LTD Composting of Municipal Solid Waste in Accra area” registered as a CDM, which the commercial operation will be expected to start from October 2012 at the earliest/7.21/), which is not to be included in this analysis. Therefore, the proposed project type has not diffused in the relevant region.

JCI validated and concluded that the CPA001 is additional.

## **7. Eligibility criteria for inclusion of a CPA in the PoA**

JCI issued CL-6 to request to demonstrate the eligibility criteria in accordance with “PoA Standard”.

JCI validated and concluded that the eligibility criteria for inclusion of a CPA in the PoA in accordance with the “PoA Standard”/4.14/ are appropriate as shown in the Table IV-2;

**Table IV-2 Check for Eligibility criteria for inclusion of a CPA in the PoA**

<b>Eligibility criteria for inclusion</b>	<b>Eligibility Criteria developed by CME (PoA-DD)</b>	<b>Demonstration in Generic CPA-DD</b>	<b>JCI's Justification</b>
(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	The geographical boundary of the CPA is Ghana which is consistent with the geographical boundary set in the PoA.	Compliance with this criterion may be substantiated with one (or more) of the following documents: -Detailed project Report, -Contract for equipment supply/civil works, -ESIA report, -Other credible documents	OK. Justified the confirmation based on project report, contract and ESIA report.  Confirmed CPA001 applies contract document, ESIA report and GPS coordinates.
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	(1) The CPA is not already included in another PoA or developed as a stand-alone CDM project. (2) There is a unique identification of the CPA composting plant.	(1) “Procedure to avoid double counting” formulated in PoA-DD. (2) Confirmation by CME that a sign stating that the CPA is part of the PoA developed by the CME will be erected at the composting plant.	OK. Justified the “Procedure to avoid double counting” and statement of CME are appropriate to avoid double counting.  Confirmed CPA001 applies “Procedure to avoid double counting” and statement of CME.
(c) The specifications of technology/measure including the level and type of service,	(1) The CPA-DD describes the waste management and methane avoidance	Compliance with this criterion may be substantiated with one (or more) of the following	OK. Justified the confirmation based on project report, contract



Eligibility criteria for inclusion	Eligibility Criteria developed by CME (PoA-DD)	Demonstration in Generic CPA-DD	JCI's Justification
performance specifications including compliance with testing/certifications;	technologies in the CPA including their performance and technical specifications. (2) All waste management and methane avoidance technologies within the CPA (will) comply with national and/or international equipment and services certificates.	documents: -Detailed project Report, -Contract for equipment supply/civil works, -ESIA report, -Other credible documents	and ESIA report.  Confirmed CPA001 applies contract document, in which it is described CPA001 consists of state-of-the-art comprehensive solid waste sorting and composting plant.
(d) Conditions to check the start date of the CPA through documentary evidence;	The starting date of the CPA is verifiable through documentary evidence and is or will not be prior to the start of PoA validation.	Supporting documentary evidence for the starting date is provided.	OK. Justified supporting documentary evidence.  Confirmed CPA001 applies contract document between Zoomlion and supplier as supporting evidence. The starting date of the CPA001 was confirmed after the GSC (25 April 2012) of the PoA by above supporting evidence dated 29 June 2012.
(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	Applicability of AM0025 (1) The CPA consists in the construction and operation of a composting plant (no other waste treatment option is expected). (2) The composting plant will treat fresh waste that in a given year would have otherwise been disposed of in a landfill. (3) The produced compost is either used as soil conditioner or disposed of in landfills. (4) The proportions and characteristics of different types of organic waste processed	(1) to (7) conditions Compliance with this criterion may be substantiated with one (or more) of the following documents: -Detailed project Report, -Contract for equipment supply/civil works, -ESIA report, -Other credible documents	OK. Justified the confirmation based on project report, contract and ESIA report.  Confirmed CPA001 applies contract document and ESIA report, in which 7 (seven) conditions are sufficiently described in accordance with applicability of AM0025.

Eligibility criteria for inclusion	Eligibility Criteria developed by CME (PoA-DD)	Demonstration in Generic CPA-DD	JCI's Justification
	<p>in the CPA can be determined.</p> <p>(5) Waste handling in the baseline scenario shows a continuation of current practice of disposing the waste in a landfill despite environmental regulation that mandates the treatment of the waste.</p> <p>(6) The compliance rate of the environmental regulations during (part of) the crediting period is below 50%</p> <p>(7) The CPA does not involve thermal treatment process of neither industrial nor hospital waste.</p>		
<p>(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A of the "PoA Standard";</p>	<p>The CPA is additional, in compliance with the relevant requirements pertaining to the demonstration of additionality.</p>	<p>The CPA is additional, in compliance with the relevant requirements pertaining to the demonstration of additionality as specified in Section B Part II of the PoA-DD: Guidelines for demonstrating additionality of microscale project activities (when applicable) for CPAs below or equal to 20 ktCO<sub>2</sub>;</p> <p>OR</p> <p>Tool for the demonstration and assessment of additionality: Mean of proof / Evidence Document: Completion of the step-by-step additionality demonstration below:</p> <p>(a) Identification of alternatives to the project activity;</p> <p>(b) Investment analysis to determine that the proposed project activity</p>	<p>OK.</p> <p>Justified "additionality tool" and "Guidelines for demonstrating additionality of microscale project activities" for demonstration of additionality.</p> <p>Confirmed CPA001 demonstrates appropriately Barrier analysis (the first-of-its-kinds) in accordance with "Additionality tool".</p>

Eligibility criteria for inclusion	Eligibility Criteria developed by CME (PoA-DD)	Demonstration in Generic CPA-DD	JCI's Justification
		is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible; (c) Barriers analysis; and(d) Common practice analysis; unless microscale threshold criteria is verified (see criteria k.1).	
(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	(1) A local stakeholder consultation has been conducted prior to the inclusion of the CPA. (2) If applicable, an environmental impact analysis has been conducted prior to the inclusion of the CPA.	Compliance with this criterion may be substantiated with one (or more) of the following documents: - ESIA report, -Stakeholder consultation report, -Other credible documents.	OK Justified the following supporting documents; - ESIA report - Stakeholder consultation report - Other credible documents  (1) Confirmed the Minutes of Meeting in Section C. of CPA-DD that the local stakeholder consultation has been appropriately conducted. And also it was confirmed at the on-site visit. (2) Confirmed the ESIA report in Section B. of CPA-DD that ESIA conducted appropriately.
(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	Confirmation that the CPA does not involve any public funding from Annex I Parties or that in case public funding is used, it does not result in diversion of ODA.	Confirmation of No diversion of ODA in case of public funding, as per CPA-DD section A.11 statement.	OK. Justified the supporting letter from CPA implementer.  Confirmed no ODA fund for CPA001.
(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban,	N/A	N/A	N/A

Eligibility criteria for inclusion	Eligibility Criteria developed by CME (PoA-DD)	Demonstration in Generic CPA-DD	JCI's Justification
grid-connected/off-grid) and distribution mechanisms (e.g. direct installation);5			
(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;	The sampling method for monitoring the parameters $z_x$ , $ECC_{CH_4,c}$ , $ECC_{N_2O,c}$ and $[p_{n,j,x} \text{ or } p_{n,j,i}]$ if applied in the CPA (e.g. in the monitoring plan) shall follow the latest the requirement outlined in the methodology AM0025 version 13.0.0 and referred tools.	a) The sampling plan contains information relating to: (i) sampling design; (ii) data to be collected; and (iii) implementation plan. b) Data variables included in the CPA sampling plan follow the latest the requirement outlined in the methodology AM0025 version 13.0.0 and referred tools for recording frequency and measurement method (tick when met).	OK Justified the parameters needed sampling in AM0025.  Confirmed the monitoring plan in CPA001.
(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA:  Microscale threshold criteria : <ul style="list-style-type: none"> <li>A CPA achieves emission reductions at a scale of no more than 20 ktCO<sub>2</sub>e per year</li> <li>A CPA is undertaken in a special underdeveloped zone (SUZ)</li> </ul>	Bibliographic evidence to confirm the proposed CPA is undertaken in a special underdeveloped zone (SUZ) with one of the two conditions left fulfilled.	OK. Justified the evidence for SUZ/7.2/7.15/.  Confirmed that CPA001 is not undertaken in the area as identified by the Savannah Accelerated Development Authority (SADA)/7.2/ and emission reductions shall be 27,889 tCO <sub>2</sub> e per year. Therefore, it was confirmed that CPA001 is not the microscale project in accordance with the "Guidelines for demonstrating additionality of microscale project activities".
(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project	If the proposed CPA is microscale project activities, CPA implementer has demonstrated that the CPA is not a debundled	It is demonstrated in the CPA-DD following the "Guidelines on assessment of debundling for SSC project activities" that the proposed CPA is not a	OK Justified a microscale CPA project should not be debundled component.

<b>Eligibility criteria for inclusion</b>	<b>Eligibility Criteria developed by CME (PoA-DD)</b>	<b>Demonstration in Generic CPA-DD</b>	<b>JCI's Justification</b>
categories.7	component of a small scale activity as described in the "Guidelines on assessment of debundling for SSC project activities".	debundled component of a small scale activity.	It was confirmed that CPA001 is large scale project in the CPA-DD.
<b>Additional eligibility criteria required by the CME</b>			
1) Awareness and agreement of those operating a CPA on PoA subscription	The CPA is either implemented by the Coordinating/managing entity or by another entity which has signed a binding agreement with the CME which ensures that they are aware and agree that their activity is subject to a PoA.	Binding agreement signed by CPA implementer and the CME.	OK. Justified a binding agreement with implementer and CME as required evidence.  Confirmed that the implementer of CPA001 is Zoomlion Ghana Ltd.
2) Approval of CPA by CME	The CPA-DD has been reviewed by the CME and submitted to a DOE for inclusion into the PoA.	Technical review report drafted by the CME review team.	OK. Justified a technical review report as required evidence.  Confirmed that the CPA001 was reviewed by CME.
3) Crediting period	The crediting period of the CPA shall not exceed the length of the PoA (i.e. 28years) regardless of the time of inclusion of CPA in the PoA.	CPA implementer's statement regarding the chosen crediting period.	OK. Justified the CPA implementer's statement as required evidence.  It was confirmed that the crediting period of the CPA001, 10 years fixed, shall not exceed 28 years.
4) CER ownership	The CPA is either implemented by the Coordinating/managing entity or by another entity which has signed a binding agreement with the CME which ensures that they are aware and agree that their carbon rights have to be relinquished to the CME.	Binding agreement signed by CPA implementer and the CME	OK. Justified a binding agreement with implementer and CME as required evidence.  It was confirmed that CER rights of Zoomlion Ghana Ltd. (CPA001 implementer) have to be relinquished to the CME with the binding

Eligibility criteria for inclusion	Eligibility Criteria developed by CME (PoA-DD)	Demonstration in Generic CPA-DD	JCI's Justification
			agreement..

As described in the above Table IV-2, it was confirmed that the eligibility criteria are verifiable and sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.

## 8. Application of the selected baseline and monitoring methodology

### 8.1 Application of multiple methodologies

JCI confirmed that the generic CPA will consist to implement composting projects that are eligible under AM0025 methodology; therefore multiple methodologies will not be applied for the PoA. Only the methodology of AM0025 Version 13.0.0 /4.1/ is applied..

### 8.2 Applicability of the selected baseline and monitoring methodology to the project

JCI confirmed that the PoA introduces MSW composting plant through the on-site visit and related documents.

JCI checked whether the PoA and CPA001 meet the following nine (9) conditions of applicability of AM0025 as shown in the below Table IV-3.

In doing so, the following steps and information have been taken into consideration:

Steps: Document review, Follow-up actions (On-site visit, interviews), etc.

- 1) Document review: Findings (CARs, CLs), Plant layout, ESIA Report, Technical specifications, Design data, Relevant laws/regulations/codes, Production reports, Internet websites
- 2) Follow-up actions: Observation/inspection of the physical site and/or equipment during on-site visit and interviews with stakeholders
- 1) Document review  
JCI has reviewed the documents of ESIA report/5.1/, Technical specifications/data/8.2//8.3/ and so on, and confirmed that CPA001 would be newly installed the composting plant with sorting and recycling process using MSW.
- 2) On-site visit during 18 to 19 and 25 June 2012/10.1/  
JCI confirmed at the on-site that the installation of CPA001 was not started yet.
- 3) Confirmation of the applicability

PoA-DD (Part II) states nine (9) applicability conditions for the PoA according to AM0025/4.1/. JCI has checked nine (9) applicability conditions as follows, and validated and concluded those conditions are appropriately defined for CPAs according to AM0025.

**Table IV-3 Applicability check for the technology/measure in AM0025.**

No	Applicability Conditions of AM0025	CPA Specification	Check Result
----	------------------------------------	-------------------	--------------



No	Applicability Conditions of AM0025	CPA Specification	Check Result
1	<p>The project activity involves one or a combination of the following waste treatment options for the fresh waste that in a given year would have otherwise been disposed of in a landfill:</p> <p>(a) A composting process in aerobic conditions;</p> <p>(b) Gasification to produce syngas and its use;</p> <p>(c) Anaerobic digestion with biogas collection and flaring and/or its use;</p> <p>(d) Mechanical/thermal treatment process to produce refuse-derived fuel (RDF)/stabilized biomass (sb) and its use. The thermal treatment process (dehydration) occurs under controlled conditions (up to 300 degrees Celsius). In case of thermal treatment process, the process shall generate a stabilized biomass that would be used as fuel or raw material in other industrial process. The physical and chemical properties of the produced RDF/SB shall be homogenous and constant over time;</p> <p>(e) Incineration of fresh waste for energy generation, electricity and/or heat. The thermal energy generated is either consumed on-site and/or exported to a nearby facility. Electricity generated is either consumed on-site, exported to the grid or exported to a nearby facility. The incinerator is rotating fluidized bed or circulating fluidized bed or hearth or grate type.</p>	Each CPA will consist in the installation and operation of a municipal solid waste sorting and <b>composting</b> plant only.	<p>OK, Condition is appropriately defined according to AM0025.</p> <p>No. 1 (a) is applicable to CPA001.</p> <p>This is confirmed by observation and interview at the on-site/10.1/</p>
2	In case of composting, the produced compost is either used as soil conditioner or disposed of in landfills;	The produced compost is either used as soil conditioner or disposed of in landfills.	<p>OK, Condition is appropriately defined according to AM0025.</p> <p>No.2 is applicable to CPA001.</p> <p>This is confirmed by observation/10.1/ and ESIA report/5.1/</p>
3	The proportions and characteristics of different types of organic waste processed in the project activity can be determined, in order to apply a	Ex-ante proportions and characteristics of different types of organic waste will have to be provided for each	OK, Condition is appropriately defined according to AM0025.

No	Applicability Conditions of AM0025	CPA Specification	Check Result
	multiphase landfill gas generation model to estimate the quantity of landfill gas that would have been generated in the absence of the project activity;	CPA and will have to be sampled during the monitoring for ex-post calculation purposes.	No.3 is applicable to CPA001.  This is confirmed by ESIA report/5.1/ and CPA001/1.2/Section D.6.3..
4	Waste handling in the baseline scenario shows a continuation of current practice of disposing the waste in a landfill despite environmental regulation that mandates the treatment of the waste, if any, using any of the project activity treatment options mentioned above;	At the time of PoA validation, Environmental regulations in Ghana do not mandate the use of any waste treatment option mentioned in AM0025, thus CPAs included in the PoA does not fall under any compliance trend to enforced regulation.	OK, Condition is appropriately defined according to AM0025.  No.4 is applicable to CPA001.  This is confirmed by regulation/6.5//6.6//6.7/ and ESIA report/5.1/
5	The compliance rate of the environmental regulations during (part of) the crediting period is below 50%; if monitored compliance with the MSW rules exceeds 50%, the project activity shall receive no further credit, since the assumption that the policy is not enforced is no longer tenable;	Environmental regulation in Ghana do not mandate the use of any waste treatment option mentioned in AM0025.	OK, Condition is appropriately defined according to AM0025.  No.5 is applicable to CPA001. This is confirmed by interview with EPA, regulation/6.5//6.6//6.7/ and ESIA report/5.1/.
6	Local regulations do not constrain the establishment of RDF production plants/thermal treatment plants nor the use of RDF/stabilized biomass as fuel or raw material;	As mentioned in condition 1 each CPA will consist in the installation and operation of a municipal solid waste sorting and composting plant only.	OK, This is not applicable to the PoA.  No.6 is not applicable to CPA001.
7	In case of RDF/stabilized biomass production, project proponent shall provide evidences that no GHG emissions occur, other than biogenic CO <sub>2</sub> , due to chemical reactions during the thermal treatment process (such as Chimney Gas Analysis report);	As mentioned in condition 1 each CPA will consist in the installation and operation of a municipal solid waste sorting and composting plant only.	OK, This is not applicable to the PoA.  No.7 is not applicable to CPA001.  No RDF plant is expected.
8	The project activity does not involve thermal treatment process of neither industrial nor hospital waste;	CPAs included in the PoA will not involve thermal treatment process of neither industrial nor hospital waste.	OK, Condition is appropriately defined according to AM0025.

No	Applicability Conditions of AM0025	CPA Specification	Check Result
			No.8 is not applicable to CPA001.  This is confirmed by ESIA report/10.1/, not industrial or hospital waste
9	In case of waste incineration, if auxiliary fossil fuel is added into the incinerator, the fraction of energy generated by auxiliary fossil fuel is no more than 50% of the total energy generated in the incinerator.	As mentioned in condition 1 each CPA will consist in the installation and operation of a municipal solid waste sorting and composting plant only.	OK, This is not applicable to the PoA. No.9 is not applicable to CPA001.  No incineration plant is expected.

JCI has checked and validated through the on-site visit (18 to 19 and 25 June 2012)/10.1/ and the desk review of PoA and CPA001 related documents in particular and the subsequent follow-up interviews. JCI confirmed that the PoA meets all the applicability conditions of the methodology in accordance with the CDM requirements with sufficient evidences.

### 8.3 Boundary

#### 1) Boundary for the PoA in terms of geographical area

The geographical boundary of the PoA will cover the 10 regions of Ghana. JCI confirmed by the interview with DNA, EPA and CME and regulations that the CME has taken into consideration all applicable national and/or sectoral policies and regulations within the 10 regions of Ghana.

#### 2) Project boundary

The following documentation and site visit observations should be taken into consideration:

- ① Documentation: Findings (CARs, CLs), plant layout plan drawing, ESIA report, Technical specifications, Design data/drawings, Contracts
- ② Site visit observations: Observations and/or inspection of the physical site and Interviews,

JCI issued CAR-3 of PoA-DD and CPA-DD to clarify the project boundary regarding the disposal landfill. The PoA-DD and CPA-DD were changed to include the disposal landfill in the project boundary in accordance with AM0025.

Therefore, CAR-3 was resolved and closed out.

## Sources and GHGs in CPA-Generic

JCI checked in the Table IV-5 below the system boundary and associated emissions for the project activity and the sources included. The result is summarized in Table IV-4 as follows;

**Table IV-4 Summary of Sources and GHGs**

Baseline emission	CH <sub>4</sub>	Emissions from decomposition of waste at the landfill
Project emissions	CO <sub>2</sub>	On-site fossil fuel consumption due to the project activity other than for electricity generation
	CO <sub>2</sub>	Emissions from on-site electricity use
	CH <sub>4</sub>	Direct emissions from the waste treatment process
	N <sub>2</sub> O	Direct emissions from the waste treatment process

**Table IV-5 Check for System Boundary and Emissions**

Source		GHGs	Included? In PoA-DD, CPA-DD	Justification/Explanation	Check result
Baseline scenario	Emissions from decomposition of waste at the landfill site	CO <sub>2</sub>	No	CO <sub>2</sub> emissions from the decomposition of organic waste are not accounted.	OK
		CH <sub>4</sub>	Yes	The major source of emissions in the baseline	OK
		N <sub>2</sub> O	No	N <sub>2</sub> O emissions are small compared to CH <sub>4</sub> emissions from landfills. Exclusion of this gas is conservative.	OK
	Emissions from electricity consumption	CO <sub>2</sub>	No	No electricity is consumed from the grid or generated onsite/offsite in the baseline scenario.	OK
		CH <sub>4</sub>	No	Excluded for simplification. This is conservative.	OK
		N <sub>2</sub> O	No	Excluded for simplification. This is conservative.	OK
	Emissions from thermal energy generation	CO <sub>2</sub>	No	No thermal energy is generated in the baseline scenario.	OK
		CH <sub>4</sub>	No	Excluded for simplification. This is conservative.	OK
		N <sub>2</sub> O	No	Excluded for simplification. This is conservative.	OK
Project scenario	On-site fossil fuel consumption due to the project activity other than for electricity generation	CO <sub>2</sub>	Yes	It includes vehicles used on-site.	OK
		CH <sub>4</sub>	No	Excluded for simplification. This emission source is assumed to be very small.	OK
		N <sub>2</sub> O	No	Excluded for simplification. This emission source is assumed to be very small.	OK
	Emissions from on-site electricity use	CO <sub>2</sub>	Yes	It includes electricity consumed from the grid or generated onsite.	OK
		CH <sub>4</sub>	No	Excluded for simplification. This emission source is assumed to be very small.	OK
		N <sub>2</sub> O	No	Excluded for simplification. This emission source is assumed to be very small.	OK

	Emissions from thermal energy generation	CO <sub>2</sub>	No	Not applicable as there is no thermal energy generated under the Project activity.	OK
		CH <sub>4</sub>	No	Excluded for simplification. This emission source is assumed to be very small.	OK
		N <sub>2</sub> O	No	Excluded for simplification. This emission source is assumed to be very small.	OK
	Direct emissions from the waste treatment processes.	CO <sub>2</sub>	No	The Project activity does not include incineration, gasification or combustion of fossil based. In addition, CO <sub>2</sub> emissions from the decomposition or combustion of organic waste are not accounted.	OK
		CH <sub>4</sub>	Yes	The composting process may not be complete and result in anaerobic decay.	OK
		N <sub>2</sub> O	Yes	N <sub>2</sub> O can be emitted as part of the composting process itself.	OK
	Emissions from waste water treatment	CO <sub>2</sub>	No	CO <sub>2</sub> emissions from the decomposition of organic waste are not accounted.	OK
		CH <sub>4</sub>	No	Not applicable as there is no wastewater anaerobic treatment expected under the CPA.	OK
		N <sub>2</sub> O	No	Excluded for simplification. This emission source is assumed to be very small.	OK

#### **GHG emissions more than 1% of the overall (VVS Para.87)**

JCI validated all potential sources of GHG emissions within the boundary of proposed project and concluded that all sources, which are expected to contribute more than 1% of the overall expected average annual emissions reductions are included in the estimation of CPA-DD/1.2/.

## **8.4 Description of baseline scenario**

The methodology /4.1/ states that in the absence of regulations requiring the waste treatment, the implementers have no economic incentives to take any waste treatment because this entails capital and operating costs. Therefore, the PoA is considered additional and the baseline scenario is that the waste is disposed of landfills with no treatment being implemented.

The CME has identified the baseline scenario is “Disposal of the waste on a landfill without the capture of landfill gas (i.e. continuation of the current situation)” in accordance with the methodology AM0025.

Therefore, JCI validated and concluded that the PoA-DD, CPA-DD /1.2/ appropriately identified “Continuation of the current situation, i.e. “Disposal of the waste on a landfill without the capture of landfill gas” as the credible and feasible baseline scenario to the project activity, complying with the selected methodology /4.1/ and the relevant tool /4.5/. The detail explanation is described in Section 6.3.

Complying with VVS ver. 03 Paragraph 94/4.15/, JCI hereby confirmed that:

- All the assumptions and data used by the project participants are listed in the PoA-DD, CPA-DD /1.2/, including their references and sources;
- All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD, CPA-DD /1.2/;
- Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- Relevant national and/or sectoral policies and circumstances are considered and listed in the

PoA-DD, CPA-DD /1.2/,

(e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represent what would occur in the absence of the PoA.

## 8.5 Estimation of emission reductions of a generic CPA and CPA001

JCI validated for the algorithms and/or formulae of generic CPA and CPA001 through taking into consideration on following steps in accordance with the paragraphs 99 of VVS.

### 1) Step-1 Validation work:

JCI has verified the data and parameters used in the equations, including references to any other data sources used.

### 2) Step-2 Results of Validation work (Providing the opinion of validation):

JCI has provided the opinion by taking following steps to assess whether the algorithms and/or formulae used to determine emission reductions for CPA001 is appropriate or not..

- (a) All assumptions and data used by the project participants are listed in the POA-DD, CPA-DD, including their references and sources are appropriate.
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD, CPA-DD /1.2/.
- (c) All values used in the PoA-DD, CPA-DD /1.2/ are considered reasonable in the context of the PoA.
- (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage emission and emission reductions.
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD, CPA-DD /1.2/.

JCI confirmed that the estimation of emission reductions of the generic CPA is in accordance with equations defined in AM0025 and five (5) Tools, “Emissions from solid waste disposal sites”(Version 06.0.1)/4.3/; “Tool to calculate the emission factor for an electricity system”(Version 02.2.1)/4.4/, Tool to calculate baseline, project and/or leakage emissions from electricity consumption” (Version 01)/4.21/, “Project and leakage emissions from composting” (Version 01.0.0) and “Tool to determine the mass flow of a greenhouse gas in gaseous stream” (Version 2.0.0) /4.5/.

JCI confirmed the emission reduction calculation through the excel spread sheet for ER calculation of CPA001 was correctly conducted as follows;

### 1) Data and parameters of CPA001 that are to be reported ex-ante

#### (1) Project emissions ( $PE_y$ )

According to AM0025 equation (1),

$$PE_y = PE_{elec,y} + PE_{fuel,on-site,y} + PE_{c,y} + PE_{a,y} + PE_{g,y} + PE_{r,y} + PE_{i,y} + PE_{w,y} + PE_{co-firing,y}$$

JCI confirmed that  $PE_{elec,y}$  and  $PE_{fuel,on-site,y}$  are accounted in  $PE_{c,y}$  (Project emissions associated with composting), and  $PE_{a,y}$ ,  $PE_{g,y}$ ,  $PE_{r,y}$ ,  $PE_{i,y}$  and  $PE_{co-firing,y}$  are not applied in the PoA, and also  $PE_{w,y}$  of CPA001 is zero, since the wastewater will be treated using aerobic treatment process.

Accordingly, Project emissions ( $PE_y$ ) consist of emissions from only the composting ( $PE_{c,y}$ ).

Project emissions associated with composting ( $PE_{c,y}$ ) are calculated according to the methodological tools/4.2//4.21/ to estimate.  $PE_{c,y}$  is equivalent to parameter  $PE_{COMP,y}$  (Project emissions from composting) due to the Tool “Project and leakage emissions from composting”/4.2/

Therefore,

According to the equation (1) Tool “Project and leakage emissions from composting”/4.2/,

$$PE_{c,y} = PE_{COMP,y} = PE_{EC,y} + PE_{FC,y} + PE_{CH_4,y} + PE_{N_2O,y} + PE_{RO,y}$$

According to the equation (1) “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”/4.21/ and the equation (3) “Project and leakage emissions from composting”/4.2/

$$PE_{EC,y} = Q_y \times SEC_{comp,default} \times EF_{EL,j,y} \times (1 + TDL_{j,y})$$

According to the equation (4), (5) and (7) Tool “Project and leakage emissions from composting”/4.2/,

$$PE_{FC,y} = Q_y \times EF_{FC,default}$$

$$PE_{CH_4,y} = Q_y \times EF_{CH_4,y} \times GWP_{CH_4}$$

$$PE_{N_2O,y} = Q_y \times EF_{N_2O,y} \times GWP_{N_2O}$$

$PE_{RO,y}$  is zero since no run-off wastewater in the CPA.

JCI confirmed the input values of parameters using the calculation for project emissions are appropriate as follows ;

Input values of parameters	Values		References	Check results
	POA-DD	CPA-DD		
$Q_y$ (Waste to compost)	To be provided at CPA level	2013: 22,842 ton/y 2014: 47,376 ton/y After 2015: 71,910 ton/y	“Tool for project emissions”	OK CL-16 was issued and confirmed the values with evidences.
$SEC_{comp,default}$ (Quantity of electricity consumed per ton of waste to compost)	0.01 MWh/t	0.01 MWh/t	“Tool for composting”	OK Confirmed the default value due to the “Tool for composting”.
$EF_{EL,j,y}$ $EF_{grid,y}$	0.4732 tCO <sub>2</sub> /MWh (Appendix 4)	0.4732 tCO <sub>2</sub> /MWh	Calculated by “Tool emission factor”	OK CL-13 (PoA-DD) on official data (2007-2009) was issued and confirmed the official data from Energy Commission of Ghana (changed to 2008-2010) was correctly applied to calculate OM, BM and CM by using “Tool emission factor”.
$EF_{EL,Fossil\ fuel,y}$	1.3 tCO <sub>2</sub> /MWh	1.3 tCO <sub>2</sub> /MWh	Scenario A of “Tool for project emissions”	Confirmed the default value due to “Tool for project emissions”
$TDL_{j,y}$	To be provided	20%	“Tool for project	OK



Input values of parameters	Values		References	Check results
	POA-DD	CPA-DD		
(technical transmission and distribution losses)	at CPA level		emissions"	Confirmed the default value 20% for project electricity consumption due to the "Tool for project emissions".
$EF_{FC, default}$ (emission factor for fossil fuel consumed per tonne of waste to compost)	0.0207 tCO <sub>2</sub> /t	0.0207 tCO <sub>2</sub> /t	2006 IPCC	OK Confirmed the default value due to the "Tool for composting".
$EF_{CH_4, y}$ (emission factor for methane per tonne of waste to compost)	0.002 tCH <sub>4</sub> /t	0.002 tCH <sub>4</sub> /t	"Tool for composting"	OK Confirmed the default value due to the "Tool for composting".
$GWP_{CH_4}$	21	21	IPCC	OK Confirmed IPCC
$EF_{N_2O, y}$ (emission factor of nitrous oxide per tonne of waste to compost)	0.0002 tN <sub>2</sub> O/t	0.0002 tN <sub>2</sub> O/t	"Tool for composting"	OK Confirmed the default value due to the "Tool for composting".
$GWP_{N_2O}$	310	310	IPCC	OK Confirmed IPCC

JCI issued CL-12 (CPA-DD) regarding 720 MWh of electricity consumption.

It was confirmed that the value is due to the "Tool for composting" and closed out.

## (2) Baseline emissions (BE<sub>y</sub>)

According to AM0025 equation (20) and (21),

$$BE_y = (MB_y - MD_{reg,y}) + BE_{EN,y}$$

$$MD_{reg,y} = MB_y * AF$$

JCI confirmed that no Adjustment Factor (AF) is accounted for since no methane capture and destruction practises are mandated by regulatory or contractual requirements in Ghana at the time of CPA inclusion. Therefore, AF = 0 and so MD<sub>reg,y</sub> = 0.

BE<sub>EN,y</sub> is zero, since no generation of energy on the PoA.

Therefore, BE<sub>y</sub> = MB<sub>y</sub> (the methane produced in the landfill in the absence of the project activity)

According to the equation (2) of Tool "Emission from solid waste disposal sites"

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

$$BE_{CH_4, SWDS, m} = \phi_y \times (1 - f_y) \times GWP_{CH_4} \times (1 - OX) \times \frac{16}{12} \times F \times DOC_{f,m} \times MCF_y \times \sum_{x=1}^m \sum_i A_{j,x} \times DOC_j \times e^{-\frac{k_j}{12} \times (m-i)} \times (1 - e^{-\frac{k_j}{12}})$$

JCI confirmed the input values of parameters using the calculation of baseline emissions are appropriate as follows;

Input values of parameters	Values		References	Check results
	PoA-DD	CPA-DD		
$\phi_y$	To be	0.85	"Emission from solid	OK

Input values of parameters	Values		References	Check results
	PoA-DD	CPA-DD		
(Model correction factor to account for model uncertainties for year y)	provided at CPA level		waste disposal sites”	Confirmed the default value at wet condition of Appendix B in “Emission from solid waste disposal sites”
$f_y$ (Fraction of methane captured at the SWDS and flared, combusted)	monitored	0	“Emission from solid waste disposal sites”	OK No methane captured at the SWDS and flared, combusted in CPA001.
$GWP_{CH_4}$	21	21	IPCC	OK
OX (Oxidation factor)	0.1	0.1	“Emission from solid waste disposal sites”	OK Confirmed the default value due to “Emission from solid waste disposal sites”
F (Fraction of methane in the SWDS gas)	0.5	0.5	“Emission from solid waste disposal sites”	OK Confirmed the default value due to “Emission from solid waste disposal sites”
$DOC_{f,m}$ (Fraction of degradable organic carbon that composes under the specific conditions in the SWDS for month m)	0.5	0.5	“Emission from solid waste disposal sites”	OK Confirmed the default value due to “Emission from solid waste disposal sites”
$MCF_y$ (Methane correction factor)	To be provided at CPA level	1.0	“Emission from solid waste disposal sites”	OK Confirmed the default value for anaerobic managed solid waste disposal sites in “Emission from solid waste disposal sites” by observation at the on-site assessment.
$A_{j,x}=W_{j,i}$ (Amount of solid waste type j)	Calculated based on monitored data	(Waste to compost= $Q_y$ ) * (Composition of waste entering into the compost plant)	Table 11 in CPA-DD	OK Confirmed in the Table 11.
$DOC_j$ (Fraction of degradable organic carbon in the waste type <sub>j</sub> )	Table 4 of “Emission from solid waste disposal	Table 4 of “Emission from solid waste disposal	Table 6 in CPA-DD	OK Confirmed the default value of Table 4 in “Emission from solid waste disposal sites”

Input values of parameters	Values		References	Check results
	PoA-DD	CPA-DD		
	sites”	sites”		
$k_j$ (Decay rate for the waste type j)	To be provided at CPA level	Table 5 of “Emission from solid waste disposal sites”	Table 7 in CPA-DD	OK CL-11 (CPA) was issued and confirmed the default value at tropical condition (MAT>20°C, MAP>1000mm) of Table 5 in “Emission from solid waste disposal sites”

Furthermore,

JCI issued CL-16 1) to clarify the collected waste composition (%) before sorting and sorting efficiency. CL-16 1) was resolved and closed out. Detail is described in Appendix A.

JCI issued CL-16 2) to clarify the quantity of waste collected in 2013, 2014 and 2015 or later. CL-16 2) was resolved and closed out. Detail is described in Appendix A.

For the quantity of compost generated, JCI issued CL-17 to clarify its 60% per waste to compost. 60% was confirmed by evidence, therefore, CL-17 was resolved and closed out. Detail is described in Appendix A.

Therefore, JCI validated and concluded that the emission from methane generation from the landfill in the absence of the project activity (Baseline emissions) is appropriately calculated.

### (3) Leakage

As the project activity is exclusively composting, then  $L_y = LE_{COMP,y}$ .

Leakage emissions from composting ( $LE_{COMP,y}$ ) shall be accounted for if compost is subjected to anaerobic storage or disposed of in a Solid Waste Disposal Sites (SWDS).  $LE_{COMP,y}$  shall be estimated to account for methane emissions from the anaerobic decay of compost, using the methodological tool “Emissions from solid waste disposal sites”.

Compost produced under this CPA001 will not be stored anaerobic or disposed of in SWDS.

Therefore  $L_y = LE_{COMP,y} = 0$

Transport emissions are not accounted for because it is assumed that similar transportation activities would occur in the baseline.

## 2) Ex-ante calculations of emission reductions (CPA001)

From the result of considering the above validation, the estimated emission reductions (Average over 10 years =27,899 tCO<sub>2</sub>e) is appropriately summarized in Section B.6.4 of the CPA-DD/1.2/ as below.

Year	Baseline emissions (t CO <sub>2</sub> e)	Project emissions (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	Emission reductions (t CO <sub>2</sub> e)
April 1 <sup>st</sup> to December 31 <sup>st</sup> 2013	2,251	2,995	-	-743
2014	10,273	6,211	-	4,061
2015	20,827	9,428	-	11,399
2016	30,803	9,428	-	21,374

Year	Baseline emissions (t CO <sub>2</sub> e)	Project emissions (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	Emission reductions (t CO <sub>2</sub> e)
2017	38,131	9,428	-	28,702
2018	43,617	9,428	-	34,188
2019	47,809	9,428	-	38,380
2020	51,081	9,428	-	41,652
2021	53,691	9,428	-	44,262
2022	55,817	9,428	-	46,388
January 1 <sup>st</sup> to March 31 <sup>st</sup> 2023	14,242	5,015	-	9,227
<b>Total</b>	<b>368,542</b>	<b>89,647</b>	<b>-</b>	<b>278,890</b>
Total number of crediting years	10			
Annual average over the crediting period	<b>36,854</b>	<b>8,965</b>	<b>-</b>	<b>27,889</b>

JCI confirmed that the calculations are correct.

In conclusion, JCI validated and concluded that the emission reductions are correctly estimated complying with AM0025 version 13.0.0/4.1/ and the relevant tools/4.2-4.5//4.21/, and parameters and data for the calculations which are sourced from proper data sources.

## 8.6 Monitoring plan

The steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design is as below;

### (1) Desk review

☐ To assess whether the monitoring plan is in accordance with AM0025/4.1/ and related Tools/4.2//4.3//4.4//4.5//4.21 /

☐ To assess whether the data and parameters not monitored are correctly mentioned

### (2) On-site assessment

☐ To assess the project participants ability to implement the monitoring plan

### (3) Findings of CLs

#### 1) Compliance of the monitoring plan with the approved methodology in CPA001:

The monitoring plan was validated from the aspect of compliance with the requirements of the applied methodology AM0025 and the related Tools.

JCI issued the following CL-12 (PoA-DD), CL-18 (CPA-DD)

- ① CL-12 (PoA-DD) on the records of arrangements for training and capacity development for personnel.

It was mentioned clearly in the revised CPA-DD/1.2/. Therefore, CL-12 (PoA-DD) was resolved and closed out.

- ② CL-18 (CPA-DD) to confirm the monitoring organization

The Ability of ZOOMLION GHANA LTD was confirmed appropriateness and CL-18 was resolved and closed out.

#### A) Parameters to be monitored for ex-post

The monitoring parameters specified in the CPA001 were cross-checked with AM0025 and the related Tools, and confirmed that the following nine (9) parameters for ex-post monitoring parameters in section

D.7.1 “Data and parameters to be monitored” of CPA-DD/1.2/ are fully compliance with the methodology.

Table IV-6 Check for the parameters to be monitored Parameter

No.	Parameter	Unit	Description	Monitoring Frequency	Check result Reference
1	MB <sub>y</sub>	tCO <sub>2</sub> e	Methane produced in the Landfill	Calculated -	OK
2	RATE <sup>compliance,</sup> <sub>y</sub>	Number	Rate of compliance	Annually	OK AM0025
3	f <sub>y</sub>	-	Fraction of methane captured at the SWDS	Annually	OK Application B of “Emissions from solid waste disposal sites”
4	A <sub>j,i</sub>	t	Amount of organic waste type j	Continuously, aggregated at least monthly for month i	OK Application B of “Emissions from solid waste disposal sites”
5	P <sub>n,j,i</sub>	-	Weight fraction of the waste type	Minimum of three samples every three months	OK “Emissions from solid waste disposal sites”
6	AF	%	Methane destroyed due to regulatory	At renewal of crediting period	Not applicable. The crediting period of CPA001 is fixed 10years.
7	TDL <sub>j,y</sub>	%	Average technical transmission and distribution losses	Annually	OK “Tool for project emissions”
8	Q <sub>y</sub>	t/y	Quantity of waste composted	Continuously Weighbridge or any other applicable weighing device is subject to periodic calibration (in accordance with stipulation of the weighing device supplier)	OK “Tool for composting”
9	M <sub>compost,y</sub>	tonnes	Total quantity of compost produced in year y	Weekly Weighted on calibrated scale	OK AM0025

JCI issued CL-18 on the ability of monitoring organization of ZOOMLION GHANA LTD.

JCI confirmed at the on-site assessment that monitoring organization of ZOOMLION GHANA LTD and the ability to implement the monitoring plan are sufficient. Therefore, CL-18 was resolved and closed out.

Therefore, JCI validated and concluded that the monitoring plan mentioned in Section D.7.2. of the CPA-DD/1.2/ is in accordance with AM0025/4.1/, the related Tools//4.2//4.3//4.4//4.5//4.21/ and the management system development and implementation by CME in the PoA/1.2/are appropriate.

## 9. Environmental impacts

JCI confirmed that EIA is required for the proposed PoA in accordance with the regulation of Ghana and also confirmed in the CPA-DD/1.2/ that the project participant has undertaken the ESIA (EIA) in accordance with the regulations of Ghana and the procedures to conduct ESIA. JCI reviewed the contents of the ESIA report/5.1/ and confirmed the ESIA report was conducted appropriately in accordance with the regulations of Ghana at the interview with DNA and EPA during the on-site assessment/10.1/.

JCI validated and concluded that the ESIA on the project has been undertaken appropriately

## 10. Local stakeholder consultation

The steps taken to assess the adequacy of the local stakeholder consultation

1) Desk review of the CPA-DD

☐ To assess whether the local stakeholder consultation was conducted adequately.

2) On-site assessment

☐ To interview with the local stakeholders

1) Desk review of the CPA-DD

JCI confirmed that the local stakeholder consultation was conducted adequately in the CPA-DD/1.2/.

2) On-site assessment

Due to the interview with 8 local stakeholders (residents) at the project site during the on-site assessment/10.1/, JCI confirmed that all of the local stakeholders interviewed agreed on and look for the project nevertheless any concerns (smells) described in the CPA-DD/1.2/.

JCI validated and concluded that the local stakeholder consultation regarding the public hearing notice, the meetings and the meeting programme, and due account taken of any comments/12.1/ was conducted adequately through the above interview.

## Appendix A Protocol for CDM (PoA) Project

### Abbreviation

<b>CAR</b>	Corrective Action Request	<b>CL</b>	Clarification Request	<b>FAR</b>	Forward Action Request,
<b>VVS</b>	Validation and Verification Standard			<b>NA</b>	Not Applicable
<b>Tbv</b>	To be verified	<b>PA</b>	Project Activities	<b>PP</b>	Project Participants
<b>PoA</b>	Programme of Activities	<b>CPA</b>	Component Project Activity	<b>PoA GL, CPA GL</b>	PoA-DD, CPA-DD Completion Guidelines
<b>Std Add.</b>	Standard for Demonstration of Additionality, Eligibility Criteria and application of Multiple methodologies for Programme of Activities.				
<b>Std. Sampling</b>	Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities				

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	<b>General guidelines(PoA)</b>		--	--
	<b>Title of the project activity:</b>		--	--
1.	Confirm that the PDD Form applies <u>version 02.0 of F-CDM-PoA-DD</u> . (Guideline Para.8)	PoA GL	OK	
2.	Confirm that the PDD is completed <u>in English</u> . (all attached documents must be <u>in English</u> ) (Guideline Para.11)	PoA GL	OK	
3.	Confirm that the PDD is completed using the same format <u>without modifying its font, headings or logo</u> , and without any other alteration to the form. (Guideline Para. 12)	PoA GL	OK	
4.	Confirm that the tables and their columns in the PDD are <u>not modified or deleted</u> . (Guideline Para. 13)	PoA GL	OK	
5.	Confirm that the <u>blanks are left intentionally</u> for the “not applicable section” of the PDD. (Guideline Para. 14)	PoA GL	OK	
6.	Confirm that the values in the PDD are presented in an internationally recognized format.{For example: digits grouping in thousands and a decimal point with a dot (.), not with a comma (,)} ( e.g 1,000 representing one thousand and 1.0 representing one. Confirm that the units used for weights/currency are in S.I. units/norms (thousand/million)	PoA GL	OK	
<b>Check for PoA-DD</b>				
<b>PART I.</b>	<b>Programme of activities (PoA)</b>		--	--
<b>Section A.</b>	<b>General description of PoA</b>			
<b>A.1</b>	<b>Title of the PoA:</b>			
(a)	Confirm the followings related to the title of the PoA.  (a) the title of the PoA.	PoA GL	-	
			OK	
(b)	(b) the version number of the PoA-DD.		OK	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants



**TABLE-1 REQUIREMENTS CHECKLIST (PoA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
(c)	(c) the date the PoA-DD in DD/MM/YYYY.		OK	
<b>A.2.</b>	<b>Purpose and general description of the PoA:</b>			
(a)	Confirm that the description is provided on the policy/measure or stated goal of the PoA.	PoA GL	No, Tbv	CL-1
(b)	Confirm that the description is provided on the framework for the implementation of the PoA.	PoA GL	OK	
(c)	Confirm that the description is provided on the voluntary action by the CME for PoA.	PoA GL	OK	
<b>A.3</b>	<b>CMEs and participants of PoA</b>			
(a)	Confirm that the identification of the CME is provided for the PoA.	PoA GL	OK	
(b)	Confirm that the description is provided on Project participants of the PoA.	PoA GL	OK	
<b>A.4</b>	<b>Party(ies)</b>			
(a)	Confirm that the Party(ies), PPs and CMEs are listed in the table.	PoA GL	No, Tbv	CL-4
(b)	Confirm that the “(host)” is indicated in the table.	PoA GL	OK	
(c)	Confirm that the name of PPs are consistent with the contact information in Appendix 1	PoA GL	OK	
<b>A.5.</b>	<b>Physical/ Geographical boundary of the PoA</b>			
(a)	Confirm that the description is provided on the defined boundary of PoA as a geographical area. (e.g. municipality, region within a country, country or several countries)	PoA GL	OK	
<b>A.6.</b>	<b>Technologies/measures</b>			
	Confirm that the description is provided on the technologies for the CPAs.	PoA GL	OK	
<b>A.7.</b>	<b>Public funding of PoA</b>			
	Confirm that the description is provided on no public funding from Parties for PoA.	PoA GL	OK	
	If public fund has received for PoA, (a)Provide information on Parties providing public funding; (b)Attach in Appendix 2: the affirmation obtained from such Parties	PoA GL	NA	
<b>Section B.</b>	<b>Demonstration of additionality and development of eligibility criteria</b>			
<b>B.1.</b>	<b>Demonstration of additionality for PoA</b>			
	Confirm that additionality is demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur.	Std Add. Para.7	No, Tbv	CL-5

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (PoA)**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	If PoA consists of one or more microscale projects as CPAs, confirm that PoA includes eligibility criteria derived from all the relevant requirements of the “ <i>Guidelines for demonstrating additionality of microscale project activities</i> ”.	Std Add. Para.8.	OK	
	If PoA consists of one or more small-scale projects as CPAs, confirm that PoA includes eligibility criteria derived from all the relevant requirements of <i>attachment A of Appendix B of the “Simplified modalities and procedures for small-scale CDM project activities”</i> .	Std Add. Para.9	NA	
	If PoA consists of one or more large scale projects as CPAs, confirm that PoA includes eligibility criteria derived from all the relevant requirements contained in the additionality section of the large scale methodologies.	Std Add. Para.10	Tbv	CL-6
	Confirm whether the CME demonstrates that compliance with the additionality-related eligibility criteria set in the PoA-DD ensures that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.	Std Add. Para.11	Tbv	CL-6
	Confirm that for PoA involving combinations of technologies/measures and/or methodologies, the eligibility criteria relative to each of them are proposed to demonstrate additionality. Types of combinations as indicated in paragraph 29(a) to 29(d) of Std Add. shall be taken into account.	Std Add. Para.12	NA	
<b>B.1.</b>	<b>Demonstration of additionality for PoA</b>		--	--
B.1.1	Confirm that the additionality for the PA is demonstrated adequately in the PDD in accordance with the selected methodology.	VVS Para. 101	No, Tbv	CL-6
B.1.2	Confirm whether the PP uses the “Tool for the demonstration and assessment of additionality”. If yes, confirm that it is in line with the methodology.	PoA GL	OK OK	
B.1.3	Confirm that the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by the PP to support the demonstration of additionality are assessed using local knowledge and sectoral and financial expertise.	VVS Para. 102	No, Tbv	CL-6
B.1.4	If required by the applicable methodology, confirm that the tools and guidelines to demonstrate are considered for the additionality of proposed PA, and also confirm that the specific complementary or alternative requirements included in the methodology for demonstrating the additionality.	Para. 103	OK	
<b>-</b>	<b>Identification of alternatives (Para. 113-116)</b>			
B.1.5	Confirm that the baseline scenario is prescribed in the methodology selected by the CDM PA.  If no (no prescribed baseline scenario), confirm that the PDD identified credible alternatives to the PA in order to determine the most realistic baseline scenario.	VVS Para. 113	OK -	
B.1.6	Confirm that the list of alternatives given in the PoA-DD have been assessed and determined by considering the following conditions. i. The list of alternatives includes the option that the PA is undertaken without being registered as CDM PA.	VVS Para. 114	OK -	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	ii. The list contains all plausible alternatives that are considered to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM PA on the basis of local and sectoral knowledge. iii. The alternatives comply with all applicable and enforced legislation.		-	
-	<b>Investment analysis (Para. 117-123)</b>		OK, but not applied CPA001	
B.1.7	Confirm whether the investment analysis is used to demonstrate the additionality of the CDM PA.	VVS Para. 117	OK	
B.1.8	Confirm that the latest version of the “Guidelines on the assessment of investment analysis” been applied for assessment.	VVS Para. 118	OK	
B.1.9	<b>&lt;Alternatives &gt;</b> Confirm that the PA is not the most economically or financially attractive alternative, or that it is not economically or financially feasible without CDM.	VVS Para. 119	OK	
B.1.9(a)	(a) Confirm that the PA would produce no financial or economic benefits other than CDM-related income. Confirm that the costs for the PA were documented. Confirm that there is at least one alternative which is less costly than the PA.		OK	
B.1.9(b)	(b) Confirm that the PA is less economically or financially attractive than at least one other credible and realistic alternative.		OK	
B.1.9(c)	(c) Confirm that the financial returns of the proposed PA would be insufficient to justify the required investment.		OK	
B.1.10	<b>&lt;Accuracy &gt;</b> Confirm that the accuracy of financial calculations for investment analysis was verified with the following means of validation.	VVS Para. 120	OK	
B.1.10 (a)	(a.1) Confirm that the suitability of the financial indicator selected by the PP is assessed. (a.2) Confirm that thorough assessment of all parameters and assumptions used in calculating such financial indicators was conducted. (a.3) Confirm that the accuracy and suitability of these parameters were determined using available evidence and expertise in relevant accounting practices.		OK	
B.1.10 (b)	(b) Confirm that the parameters are cross-checked against third-party or publicly available sources, such as invoices or price indices.		OK	
B.1.10 (c)	(c) Confirm that the FSR, public announcements and annual financial reports related to the PA and the PP are as appropriate.		OK	
B.1.10 (d)	(d) Confirm that the correctness of computations carried out and documented by the PP are adequate.		OK	
B.1.10 (e)	(e.1) Confirm that the suitability of selected variations in sensitivity analysis is adequate. (e.2) Confirm that the suitability of conditions and ranges for selected variations in sensitivity analysis		OK	
			OK	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:** To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	are adequate.			
	(e.3) Confirm that the likelihood of the conditions for variations in sensitivity analysis are adequate.		OK	
B.1.11	<b>&lt;Bench mark&gt;</b> Confirm that the suitability of benchmark applied in the investment analys is confirmed with the following means.	VVS Para. 121	OK	
B.1.11(a)	(a) Confirm that the type of benchmark applied is suitable for the type of financial indicator presented.		OK	
B.1.11(b)	(b) Confirm that risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity.		OK	
B.1.11(c)	(c) Confirm that it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark.		OK	
B.1.12	<b>&lt;FSR &gt;</b> Confirm that the PP rely on values from FSR that are approved by national authorities for PA.	VVS Para. 122	OK	
B.1.13	If yes, confirm the suitability of values from FSR with the following means of validation.		OK	
B.1.13(a)	(a.1) Confirm that the FSR is the basis for the decision to proceed with the investment in the project.		OK	
	(a.1) Confirm that the period of time between the finalization of the FSR and the investment decision is sufficiently short.		OK	
	(a.1) Confirm that it is unlikely in the context of the underlying PA that the input values would have materially changed..		OK	
B.1.13(b)	(b) Confirm that the values used in the PDD and associated annexes are fully consistent with the FSR.		OK	
B.1.13(c)	If no, (the inconsistencies occurred), confirm that the appropriateness of the values in PDD is assessed.		OK	
	(c.1) Confirm that the input values from the FSR are valid and applicable at the time of investment decision.		OK	
	(c.2) Confirm that this is confirmed on the basis of specific local and sectoral expertise, by cross-checking or other appropriate means.		OK	
-	<b>Barrier analysis (Para. 124-127)</b>		OK, applied CPA001	
B.1.14	Confirm that barrier analysis is used to demonstrate the additionality of the proposed CDM PA.	VVS Para. 124	OK	
B.1.14	If yes (barrier analysis is used), Confirm whether the PA faces barriers that:		OK	
B.1.14(a)	(a) prevent the implementation of this type of proposed PA.		OK	
B.1.14(b)	(b) do not prevent the implementation of at least one of the alternatives..		OK	
B.1.15	Confirm whether there are issues that have direct impact on the financial returns of the PA other than:	VVS Para. 125	-	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
B.1.15(a)	(a) risk related barriers, for example risk of technical failure, that could have negative effects on financial performance.		OK	
B.1.15(b)	(b) barriers related to the unavailability of sources of finance for the PA. If yes, confirm that these issues cannot be considered as barriers and shall be assessed by investment analysis.		OK	
B.1.16	Confirm that following two-step process are applied to assessing the barrier analysis .	VVS Para. 126	-	
B.1.16(a)	(a) Confirm that the barriers are real through the following means. <ul style="list-style-type: none"> <li>Confirm that the barriers listed in the PoA-DD exist by using the available evidence and/or conducting interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary).</li> <li>Confirm that the existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics.</li> <li>Confirm that the existence of a barrier is substantiated only by the opinions of the project participants.</li> </ul> If yes, this barrier can not be considered as adequately substantiated. - If it is considered, on the basis of its sectoral or local expertise, that a barrier is not real or is not supported by sufficient evidence, confirm that it shall raise a CAR to have reference to this barrier removed from the project documentation.		OK	
			-	
			-	
			-	
			-	
B.1.17(b)	(b) Confirm that the barriers prevent the implementation of the PA but not the implementation of at least one of the possible alternatives:through the following means. <ul style="list-style-type: none"> <li>Confirm, by applying the local and sectoral expertise, that a barrier or set of barriers would prevent the implementation of the PA.</li> <li>Confirm that a barrier or set of barriers would not equally prevent implementation of at least one of the possible alternatives, in particular the identified baseline scenario.</li> </ul>	VVS Para. 126	OK	
			-	
			-	
<b>Common practice analysis (Para. 128-130)</b>				
B.1.18	Confirm that a common practice analysis is used to demonstrate the additionality of the proposed CDM PA.	VVS Para. 128	OK	
B.1.19	If yes (a common practice analysis is used),	Para. 129	OK	
B.1.19(a)	Confirm that the PP have conducted a common practice analysis. (a) Confirm, by using official sources and local and sectoral expertise, that: <ul style="list-style-type: none"> <li>the geographical scope (e.g. the defined region) of the common practice analysis is appropriate for the assessment of common practice related to the PA’s technology or industry type.</li> <li>for certain technologies, the relevant region for assessment will be local and for others it may be transnational/global.</li> </ul>		OK	
			OK	
			-	
			-	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (PoA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	<ul style="list-style-type: none"> <li>the defined region other than the entire host country was chosen.</li> </ul> <p>If, yes confirm that the explanation of why this region is more appropriate.</p>		-	
B.1.19(b)	(b) Confirm that similar and operational projects (e.g. using similar technology or practice), other than project activities, have been undertaken in the defined region.		OK	
B.1.19(c)	(c) Confirm that similar and operational projects, other than project activities, are already “widely observed and commonly carried out” in the defined region.		OK	
	If yes for above (b) or (C), confirm that there are essential distinctions between the proposed PA and the other similar activities.		OK	
B.1.20	Confirm that the common practice analysis is assessed by applying the latest version of “Guideline for Common Practice”.	Tool for Additionality	OK	
B.1.21	Confirm that the stepwise approach for Common Practice in the Guideline is applied as follows.		OK	
	<ul style="list-style-type: none"> <li>Step 1: Calculate applicable output range as +/-50% of the design output or capacity of the PA.</li> <li>Step 2: In the applicable geographical area, identify all plants that deliver the same output or capacity, within the applicable output range calculated in Step 1, as the PA and have started commercial operation before the start date of the project.</li> </ul> <p>Note their number <math>N_{all}</math>. Registered CDM project activities shall not be included in this step.</p>		-	
	<ul style="list-style-type: none"> <li>Step 3: Within plants identified in Step 2, identify those that apply technologies different that the technology applied in the proposed PA.</li> </ul> <p>Note their number <math>N_{diff}</math>.</p>		-	
	<ul style="list-style-type: none"> <li>Step 4: Calculate factor <math>F=1-N_{diff}/N_{all}</math> representing the share of plants using technology similar to the technology used in the proposed PA in all plants that deliver the same output or capacity as the proposed PA.</li> </ul>		-	
	<ul style="list-style-type: none"> <li>The proposed PA is a “common practice” within a sector in the applicable geographical area, if the factor F is greater than 0.2 and <math>N_{all}-N_{diff}</math> is greater than 3.</li> </ul>		-	
			-	
<b>B.2.</b>	<b>Eligibility criteria for inclusion of a CPA in the PoA</b>			
B.2.1	Confirm that the description is provided on the eligibility criteria.	PoA GL	OK	
B.2.2	Confirm that the CME developed eligibility criteria for inclusion of a CPA under the PoA and shall include these criteria in the PoA design documents (e.g. CDM-PoA-DD, CDM-SSC-PoA-DD).	Std Add. Para.13	No, Tbv	CL-6
B.2.3	Confirm that the eligibility criteria shall cover as a minimum the following	Std Add. Para.13	No, Tbv	CL-6, CL-11
	(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;		-	
	(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);		-	
	(c) The specifications of technology/measure including the level and type of service, performance		-	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	<ul style="list-style-type: none"> <li>specifications including compliance with testing/certifications</li> <li>(d) Conditions to check the start date of the CPA through documentary evidence;</li> <li>(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;</li> <li>(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;</li> <li>(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;</li> <li>(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance</li> <li>(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation);</li> <li>(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;</li> <li>(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;</li> <li>(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.</li> </ul>		-	
B.2.4	Confirm that the eligibility criteria are verifiable.	Std Add.15.	No, Tbv	CL-6
B.2.5	Determine whether the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.	Std Add.16.	No, Tbv	CL-6
B.2.6	Confirm that the CPAs shall be included in the PoA on the basis of the DOE’s confirmed eligibility of CPAs where applicable undertaking sample-based checks in accordance with the approved guidelines/standard from the Board.	Std Add.19	No, Tbv	CL-6
B.2.7	For PoAs that include combinations of technologies/measures and/or methodologies, confirm that distinct eligibility criteria are developed per combination as specified in paragraph 29(a) to 29(d), in Section C below.	Std Add.20.	No, Tbv	CL-6
<b>B.3..</b>	<b>Application of methodologies</b>			
B.3.1	Confirm that the description is provided on the technology/measures and indicate the methodology chosen.	PoA GL	OK	
<b>Section C.</b>	<b>Management system</b>			
C.1.1	Confirm that the description is provided on the management system.	PoA GL	No, Tbv	CL-7

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants



**TABLE-1 REQUIREMENTS CHECKLIST (PoA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
C.1.2	Confirm whether the management system described in the PoA design document (CDM PoA-DD) in accordance with the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities.	Std Add. Para. 186	No, Tbv	CL-7
C.1.3	Confirm whether the CME has the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.	Std Add Para. 17	No, Tbv	CL-7
C.1.4	Confirm that the CME develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies (b) Records of arrangements for training and capacity development for personnel (c) Procedures for technical review of inclusion of CPAs (d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA); (e) Records and documentation control process for each CPA under the PoA (f) Measures for continuous improvements of the PoA management system (g) Any other relevant elements.	Std Add Para. 17	No, Tbv	CL-7
			-	
			-	CL-12
			-	
			-	
			-	
			-	
C.1.5	Confirm whether the elements of the management system referred to in paragraph 17 are appropriate as part of the validation of the PoA or as part of the validation of the CPA inclusion.	Std Add Para. 18	No, Tbv	CL-7
<b>Section D.</b>	<b>Duration of PoA</b>			
<b>D.1.</b>	<b>Start date of PoA</b>			
D.1.1	Confirm the start date is described.	PoA GL	No, Tbv	CL-10
D.1.2	Confirm that the start date of any CPA is not prior to the commencement of the validation of the PoA, which is the date the CDM-PoA-DD is first published for global stakeholder consultation. It is not required to assess prior consideration of CDM for PoA, as it is expected that no component of the programme will commence prior to the start date of validation.	VVS Para. 193.	No, Tbv	CL-10
		Para. 194	OK	
<b>D.2.</b>	<b>Length of the PoA</b>			
D.2.1	Confirm that the length of the PoA is described in years.	PoA GL	OK	
<b>Section E.</b>	<b>Environmental impacts</b>			
<b>E.1.</b>	<b>Level at which environmental analysis is undertaken</b>			
E.1.1	Confirm whether the environmental analysis is performed at the PoA and/or the CPA level.	PoA GL	CPA level	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	If yes, Confirm that the environmental analysis is performed for the CPA.	PoA GL	CPA level	
E.1.2	Confirm that the PP has conducted an analysis of the environmental impacts of the PA, including trans boundary impacts,	VVS Para. 134	OK	
E.1.3	Determine that those impacts are considered significant by the project participants or the host Party.	VVS Para. 134	OK	
<b>E.2.</b>	<b>Analysis of the environmental impacts</b>			
E.2.1	Confirm whether the analysis of the environmental impacts is undertaken or not. If yes, Confirm the description on the analysis for the PoA.	PoA GL PoA GL	No, Tbv -	CL-9
<b>E.3.</b>	<b>Environmental impact assessment</b>			
E.3.1	Confirm if the EIA is required or not. If EIA required, Confirm that the conclusions of EIA is provided.	PoA GL PoA GL	CPA level -	
E.3.2	Confirm that the EIA is required by the host Party, in accordance with the host Party’s procedures.	VVS Para. 135	-	
E.3.3	Confirm that the requirement for the EIA is confirmed by means of a document review and/or using local official sources and expertise.	VVS Para. 136	-	
<b>Section F.</b>	<b>Local stakeholder comments</b>			
<b>F.1.</b>	<b>Solicitation of comments from local stakeholders</b>			
F.1.1	Confirm whether the local stakeholder consultation process is performed at the PoA and/or the CPA level. If at PoA level, Confirm that the description is provided on process for local stakeholders in PoA-DD.	PoA GL PoA GL	CPA level -	
F.1.2	Confirm that the PP has completed a local stakeholder consultation process.	VVS Para. 138	-	
F.1.3	Confirm that the due steps were taken to engage stakeholders and solicit comments for the PA.	Para. 138	-	
F.1.4	Confirm, by means of document review and interviews with local stakeholders as appropriate, that : (a) comments have been invited from local stakeholders that are relevant for the PA.	VVS Para. 139	-	
<b>F.2.</b>	<b>Summary of comments received</b>			
F.2.1	Confirm that the summary is provided on stakeholders comments.	PoA GL	CPA level	
F.2.2	Confirm, by means of document review and interviews with local stakeholders as appropriate, that : (a) comments have been invited from local stakeholders that are relevant for the PA.	VVS Para. 139	-	
<b>F.3.</b>	<b>Report on consideration of comments received</b>			

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (PoA)**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
F.3.1	Confirm that the consideration is provided for all comments received.	PoA GL	CPA level	
<b>Section G.</b>	<b>Approval and authorization</b>			
G.1.1	Confirm whether the LoA is available at the time of submitting the PoA-DD to the DOE.	PoA GL	No, Tbv	CAR-1
G.1.2	If yes, Confirm that the LOA is provided with following information. (a) approval of the:Party(ies) (b) authorization for CME from each Party.	PoA GL	No, Tbv	CAR-1
<b>Check for CPA-DD-Generic</b>				
<b>PART II.</b>	<b>Generic component project activity (CPA)</b>			
	Confirm that this section is used to demonstrate the application of the PoA framework to implement generic CPAs and to demonstrate that each type of CPA meets the requirements. Where multiple technologies/measures and/or multiple methodologies are being applied, confirm that the demonstration of the application of the PoA framework to implement generic CPAs must be done for each of the combinations of technologies/measures and/or methodologies. Therefore, repeat all of Part II of these guidelines for each of the combination of technologies/measures and/or methodologies.	PoA GL	OK	
<b>Section A.</b>	<b>General description of a generic CPA</b>			
<b>A.1.</b>	<b>Purpose and general description of generic CPAs</b>			
A.1.1	Confirm that the description is provided on purpose of generic CPA.	PoA GL	OK	
<b>Section B.</b>	<b>Application of a baseline and monitoring methodology</b>			
<b>B.1.</b>	<b>Reference of the approved baseline and monitoring methodology(ies) selected</b>			
B.1.1	Confirm that the following reference of the <b>methodology</b> is exact. (i) reference number of the methodology. (ii) title of the methodology. (iii) version number of the methodology	PoA GL PoA GL PoA GL PoA GL	OK OK OK OK	
B.1.2	Confirm that the following reference of the <b>Tool</b> is exact. (i) title of the Tool (ii) version number of the Tool	PoA GL PoA GL PoA GL	OK OK OK	
<b>B.2.</b>	<b>Application of methodology(ies)</b>			
B.2.1	Confirm that the description is provided on application of methodology(ies) for generic CPA.	PoA GL	OK	
<b>B.2</b>	<b>Application of multiple methodologies for programmes of activities</b>			
B.2.2	If the multiple methodologies are applied, confirm that the combinations of technologies/measures	Std Add.	NA	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
B.2.3	and/or methodologies for a PoA are eligible with demonstration on that there are no cross effects between the technologies/measures applied. <sup>1</sup> ( <sup>1</sup> Combinations of approved methodologies contained in the “ <i>General guidelines to SSC CDM methodologies</i> ” may be applied without further assessment of cross effects, while other combinations can be applied with the analysis of cross effects. ) Where such cross effects do exist, confirm that the CME proposes the methods to account for such cross effects using the “Procedures for requests to the executive board for deviation from an approved methodology” so as to ensure that the calculation of emission reductions is accurate.	Para.28.		
			NA	
B.2.4	In other case of above combination,		NA	
<b>B.3.</b>	<b>Sources and GHGs</b>			
B.3.1	Confirm that the description is provided in the table on the sources and GHGs in generic CPA boundary.	PoA GL	No, Tbv	CAR-3
<b>B.4.</b>	<b>Description of baseline scenario</b>			
B.4.1	Confirm that the description is provided on the baseline scenario for generic CPA.	PoA GL	OK	
<b>B.5.</b>	<b>Demonstration of eligibility for a generic CPA</b>			
B.5.1	Confirm that the description is provided for the demonstration on how generic CPA meets the eligibility criteria of the PoA.	PoA GL	No, Tbv	CL-13
B.5.2	Confirm that the demonstration of the usability to assess the inclusion of CPAs in the generic CDM-CPA-DD.		OK	
<b>B.6.</b>	<b>Estimation of emission reductions of a generic CPA</b>			
<b>B.6.1.</b>	<b>Explanation of methodological choices</b>			
B.6.1.1	Confirm that the description is provided for the explanation on how the methodological steps, in the selected methodology, are applied to generic CPA.	PoA GL	OK	
B.6.1.2	Confirm that the explanation was indicated on how the methods or methodological steps in the selected methodology are applied for calculating baseline emissions, project emissions, leakage and emission reductions.	PDD GL	OK	
B.6.1.3	Confirm that the steps taken and the equations and parameters applied in the PDD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool.	VVS Para. 96	OK	
B.6.1.4	Confirm that it is clearly stated in the PDD that the proper equations are used in calculating emission reductions.	PDD GL	OK	
B.6.1.5	Confirm that the methodology allows for selection between options for equations or parameters. If yes, confirm that adequate justification has been provided for selection. (based on the choice of the baseline scenario, context of the PA and other evidence provided) .	VVS Para. 97	OK	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
B.6.1.6	Confirm that the correct equations and parameters have been used, in accordance with the methodology selected including applicable tool.	VVS Para. 97	OK	
B.6.1.7	Confirm that the justification given in the PoA-DD for the choice of data and parameters used in the equations is appropriate.	VVS Para. 98	Ok	
B.6.1.8	Confirm that data and parameters will not be monitored and will remain fixed throughout the crediting period.	Para. 98	OK	
	If yes, confirm that; <ul style="list-style-type: none"> <li>all data sources and assumptions are appropriate.</li> <li>calculations are correct as applicable to the PA.</li> <li>will result in an accurate or otherwise conservative estimate of the emission reductions.</li> </ul>		OK	
			OK	
			OK	
B.6.1.9	Confirm that data and parameters will be monitored or estimated on implementation and hence become available only after validation of the PA. If yes, confirm that the estimates provided in the PDD for these data and parameters are reasonable.	Para. 98	OK	
			OK	
<b>B.6.2.</b>	<b>Data and parameters that are to be reported ex-ante</b>			
B.6.2.1	Confirm that the tables are provided with the parameters for not monitoring.	PoA GL	OK	
<b>B.6.3.</b>	<b>Ex-ante calculations of emission reductions</b>			
B.6.3.1	Confirm that the blank tables are provided.	PoA GL	OK	
B.6.3.2	Confirm that the transparent ex ante calculation of baseline emissions, project emissions (or, where applicable, direct calculation of emission reductions) and leakage expected during the crediting period is provided.	PDD GL	OK	
B.6.3.3	Confirm that the sample calculation for each equation used, substituting the values used in the equations is provided.	PDD GL	OK	
B.6.3.4	Confirm that the relevant electronic spreadsheets for ex ante calculation are provided.	PDD GL	OK	
B.6.3.5	Confirm that the additional background information and/or data are described in Appendix 4 adequately.	PDD GL	OK	
<b>B.7.</b>	<b>Application of the monitoring methodology and description of the monitoring plan</b>			
<b>B.7.1.</b>	<b>Data and parameters to be monitored by each generic CPA</b>			
B.7.1.1	Confirm that the tables are provided with the parameters for monitoring.	PoA GL	OK	
B.7.1.2	Confirm that the specific information on how the data and parameters that need to be monitored would actually be collected during monitoring is indicated in the tables in Section B.7.1. of PDD adequately.	PDD GL	OK	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
B.7.1.3	Confirm that any relevant further background documentation is provided in Appendix 5.	PDD GL	OK	
<b>B.7.2.</b>	<b>Description of the monitoring plan for a generic CPA</b>			
B.7.2.1	Confirm that the description is provided on the monitoring plan for a generic CPA.	PoA GL	OK	
B.7.2.2	Confirm that the detailed description of the monitoring plan of the PA is developed in accordance with the monitoring requirements of the selected methodology is provided in sections B.7.1, B.7.2.	PDD GL VVS Para. 131	OK	
B.7.2.3	Confirm that the following two-step process is applied to assess compliance with the requirement of methodology.		OK	
B.7.2.3(a)	(a) Confirm the compliance of the monitoring plan with the approved methodology and the applicable tool, (i) Confirm that the list of parameters required by the selected approved methodology including applicable tool by means of document review are identified. (ii) Confirm that the description of the monitoring plan contains all necessary parameters. (iii) Confirm that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool.	VVS Para. 132	OK	
			OK	
			OK	
			OK	
7.2.3(b)	(b) Confirm the implementation of the plan, ♦ by means of review of the documented procedures. ♦ by the interviews with relevant personnel. ♦ by any physical inspection of the project site. (i) Confirm that the monitoring arrangements described in the monitoring plan are feasible within the project design. (ii) Confirm that the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the PA can be reported ex post and verified.		OK	
			-	
			OK	
			-	
			OK	
			OK	
<b>B.7.2.</b>	<b>Sampling plan</b>			
B.7.2.4	Confirm that the description of the sampling plan is provided in Section B.7.2. of PDD. (If data and parameters monitored in section B.7.1 are to be determined by a sampling approach)	PDD GL	NA	
B.7.2.5	Confirm that the parameter values are estimated by sampling in accordance with the requirements in the applied methodology separately and independently for each of the CPAs included in a PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation.	Std Sampling Para. 19.	NA	
B.7.2.6	Determine whether the proposed sampling plans provide parameter value estimating in an unbiased	Std	NA	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (POA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	and reliable manner including determining; (a) Whether the proposed sample size and sampling method is adequate to achieve the minimum confidence/precision requirements. DOEs shall be able to reproduce the sample size calculation in order to validate the proposed sample size. (b) Whether the proposed sampling plan will ensure that samples are randomly selected and are representative of the population.	Sampling Para. 20.		
			NA	
			NA	
B.7.2.7	Verify whether the PP has implemented the sampling effort and surveys according to the validated sampling plans. The verification includes determining (a) Whether the required confidence/precision has been met; (b) Whether the selected sample was representative of the population.	Std Sampling Para. 21.	NA	
			-	
			-	
B.7.2.8	As one means of validation/verification, confirm that sampling approach will be applied when the PP have not applied a sampling approach provided the indicated level of assurance in paragraphs below is met. This is for example the case of a multi-site CDM project activities or CDM PoAs applying small-scale or large scale methodologies.	Std Sampling 22.	NA	
B.7.2.9	Confirm that the acceptance sampling will be used as described in below steps as part of validation/verification activities to meet the requirements of paragraph 20 and 21 above: (a) Take a random sample of the PPs sample records; (b) Check. using own professional judgment . the acceptability (or otherwise) of the data for each record in the PPs sample records, and then; (c) Based on the number of records where there is agreement, determine if the PPs sample records meet the requirements.	Std Sampling 23.	NA	
			-	
			-	
			-	
B.7.2.10	Confirm that the size of the sample for field/onsite check is specified in advance, using own professional judgment: (i) Acceptable quality level or the Level of Assurance, i.e. the proportion of discrepancies between the PPs record and DOE record that are acceptable, e.g. 1%; (ii) The proportion of discrepancies between the PPs record and DOE record that are unacceptable, e.g. 10%.	Std Sampling 24.	NA	
			-	
			-	
B.7.2.11	Confirm that the maximum errors associated with the determination indicated in paragraph 24 shall remain at levels indicated below: (i) A 5% chance that the DOE will wrongly reject the PPs records (i.e. reject a set of records of acceptable quality); (ii) A 5% chance that the DOE will wrongly accept the PPs records (i.e. accept a set of records which is unacceptable)	Std Sampling 25.	NA	
			-	
			-	
B.7.2.12	Determine the following parameters (n, c) using provisions under 24 to 25 the	Std	NA	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants



**TABLE-1 REQUIREMENTS CHECKLIST (POA)**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	n: the size of the sample; c: the acceptance number  If the number of discrepant records in the sample is observed greater than c, then the PPs set of records is not accepted. If the number of discrepant records is equal to or less than c then the PPs set of records is accepted.	Sampling 26.	- - -	
<b>B.7.3.</b>	<b>Other elements of monitoring plan</b>			
B.7.3.1	Confirm that the operational and management structure including project operator in order to monitor emission reductions are described in Section B.7.2. of PoA-DD.	PoA GL	OK	
B.7.3.2	Confirm that the monitoring plan will be implemented and any leakage generated by the PA is described.	PoA GL	OK	
<b>Appendix 1</b>	<b>Contact information on entity/individual responsible for the PoA</b>			
	Confirm that the following mandatory fields are filled in the table.	PoA GL	OK	
	♦ Organization	PoA GL	OK	
	♦ Street/P.O. Box	PoA GL	OK	
	♦ City, Postcode	PoA GL	OK	
	♦ Country, Telephone	PoA GL	OK	
	♦ Fax,	PoA GL	OK	
	♦ e-mail	PoA GL	OK	
	♦ Name of contact person	PoA GL	OK	
	Confirm the consistency between the organization listed in above table and that in section A.4.	PoA GL	OK	
<b>Appendix 2</b>	<b>Affirmation regarding public funding</b>			
	Confirm the description on no public funding from Parties for PoA.	PoA GL	OK	
	If public fund has received for PoA, (a)Provide information on Parties providing public funding; (b)Attach in Appendix 2: the affirmation obtained from such Parties	PoA GL	NA	
<b>Appendix 3</b>	<b>Application of methodology(ies)</b>			
	Confirm that further background information on the applicability of the selected methodology(ies) is provided.	PoA GL	NA	
<b>Appendix 4</b>	<b>Further background information on ex ante calculation of emission reductions</b>			
	Confirm that further background information on the ex-ante calculation of emission reductions is provided, and that this may include data, measurement results, data sources, etc.	PoA GL	OK	
<b>Appendix 5</b>	<b>Further background information on the monitoring plan</b>			
	Confirm that further background information used in the development of the monitoring plan is	PoA GL	NA	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**TABLE-1 REQUIREMENTS CHECKLIST (PoA)**
**(OK/No/NA/Tbv)**

PoA-DD Section	<b>Check Points</b> (according to EB 66 Annex 12 “ Guidelines for Completing The Programme Design Document Form For CDM Programs of Activities”(Ver.01.0)	Reference GL,DD	Check Comment	CAR, CL, No.
	provided, and that this may include tables with time series data, additional documentation of measurement equipment, procedures etc. <ul style="list-style-type: none"> <li>◆ revision of existing methodologies to the Board</li> <li>◆ publication in a newspaper</li> <li>◆ interviews with the DNA</li> <li>◆ earlier correspondence on the project with the DNA or the secretariat.</li> </ul>	PoA GL  PoA GL		

**Table-2 Requirements Checklist (PoA) for CPA-DD-Specific**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 16 “ Guidelines for Completing The Component project Activity Design Document Form”(Ver.01.0)	Reference GL, DD	Check Comment	CAR, CL, No.
	<b>General guidelines</b>			
1.	Confirm that the CPA-DD Form applies <b>version 02.0 of F-CDM-CPA-DD.</b> (Guideline Para.8)	CPA GL	OK	
2.	Confirm that the CPA-DD is completed <b>in English.</b> (all attached documents must be <b>in English</b> ) (Guideline Para.13)	CPA GL	OK	
3.	Confirm that the CPA-DD is completed using the same format <b>without modifying its font, headings or logo,</b> and without any other alteration to the form. (Guideline Para. 14)	CPA GL	OK	
4.	Confirm that the tables and their columns in the CPA-DD are <b>not modified or deleted.</b> (Guideline Para. 15)	CPA GL	OK	
5.	Confirm that the <b>blanks are left intentionally</b> for the “not applicable section” of the CPA-DD (Guideline Para. 16)	CPA GL	OK	
	<b>Specific guidelines</b>			
<b>Section A.</b>	<b>General description of CPA</b>			
<b>A.1.</b>	<b>Title of the proposed or registered PoA</b>			
A.1.1	Confirm that the reference and title of the PoA to which this CPA is included.	CPA GL	OK	
<b>A.2.</b>	<b>Title of the CPA</b>			
A.2.1	Confirm the followings related to the title of the PoA.	CPA GL	OK	
(a)	(a) the title of the CPA and the unique identification of the CPA.	CPA GL	OK	
(b)	(b) the current version number of the CPA-DD.	CPA GL	OK	
(c)	(c) the date the CPA-DD in DD/MM/YYYY.	CPA GL	OK	
<b>A.3</b>	<b>Description of the CPA</b>			
A.3.1	Confirm that the description is provided on the technology and/or measures for the CPA.	CPA GL	OK	
<b>A.4</b>	<b>Entity/individual responsible for CPA</b>			
A.4.1	Confirm that the description is provided on the CPA implementers. (Name of PPs of PoA)	CPA GL	OK	
<b>A.5.</b>	<b>Technical description of the CPA</b>			
<b>A.5.1</b>	Confirm that the description is provided on the technologies for the CPA.	CPA GL	OK	
<b>A.6.</b>	<b>Party(ies)</b>			
A.6.1	Confirm that the Party(ies) CPA implementers (PPs) and involvement are listed in the table.	CPA GL	OK	
(a)				
(b)	Confirm that the “(host)” is indicated in the table.	CPA GL	OK	
(c)	Confirm that the name of PPs are consistent with the contact information in Appendix 1	CPA GL	OK	
<b>A.7.</b>	<b>Geographic reference or other means of identification</b>			

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**Table-2 Requirements Checklist (PoA) for CPA-DD-Specific**

(OK/No/NA/Tbv)

PoA-DD Section	Check Points (according to EB 66 Annex 16 “ Guidelines for Completing The Component project Activity Design Document Form”(Ver.01.0)	Reference GL, DD	Check Comment	CAR, CL, No.
A.7.1	Confirm that the geographic reference is indicated for the CPA ( <b><u>within one page</u></b> ). (e.g. map, registration number of GPS devices)	CPA GL	OK	
<b>A.8.</b>	<b>Duration of the CPA</b>			
<b>A.8.1.</b>	<b>Start date of the CPA</b>			
A.8.1.1	Confirm the start date is described in DD/MM/YYYY and how the start date was determined..	CPA GL	No	CAR-1, CL-6
<b>A.8.2.</b>	<b>Expected operational lifetime of the CPA</b>			
A.8.2.1	Confirm that the expected operational lifetime of the CPA is described in years and months.	CPA GL	OK	
<b>A.9.</b>	<b>Choice of the crediting period and related information</b>			
A.9.1.1	Confirm that the type of crediting period is chosen in fixed or renewable.	CPA GL	OK	
<b>A.9.1.</b>	<b>Start date of the crediting period</b>			
A.9.1.2	Confirm that the expected start date of the crediting period of the CPA is described in DD/MM/YYYY.	CPA GL	OK	
<b>A.9.2.</b>	<b>Length of the crediting period</b>			
A.9.2.1	Confirm that the length of the crediting period is described.	CPA GL	OK	
A.9.2.2	Confirm that the CPA is limited to the end date of the CPA.	CPA GL	OK	
<b>A.10.</b>	<b>Estimated amount of GHG emission reductions</b>			
A.10.1	Confirm that the table is completed by ; <ul style="list-style-type: none"> <li>the annual GHG emission reductions for each year of the crediting period</li> <li>the annual average and the total GHG emission reductions over the chosen crediting period.</li> </ul>	CPA GL	Tbv	CAR-4 CL-1
A.10.2	Confirm that the start date and end date of crediting period are consistent with those dates in Section A.8.1.	CPA GL	OK	
A.10.3	Confirm that the start date and end date of crediting period are consistent with those dates in table of Section D.6.4.	CPA GL	OK	
<b>A.11.</b>	<b>Public funding of the CPA</b>			
A.11.1	Confirm the description on no public funding from Parties for CPA.	CPA GL	OK	
A.11.2	If public fund has received for CPA, (a)Provide information on Parties providing public funding; (b)Attach in Appendix 2: the affirmation obtained from such Parties	CPA GL	NA	
<b>A.12.</b>	<b>Confirmation for CPA</b>			
A.12.1	Confirm the confirmation on that the CPA is not an individual registered CDM project nor a part of another registered CPA.	CPA GL	OK	
<b>Section B.</b>	<b>Environmental analysis</b>			

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**Table-2 Requirements Checklist (PoA) for CPA-DD-Specific**

		(OK/No/NA/Tbv)		
PoA-DD Section	Check Points (according to EB 66 Annex 16 “ Guidelines for Completing The Component project Activity Design Document Form”(Ver.01.0)	Reference GL, DD	Check Comment	CAR, CL, No.
<b>B.1.</b>	<b>Analysis of the environmental impacts</b>			
B.1.1	Confirm whether the analysis of the environmental impacts is undertaken or not.	CPA GL	NA	
B.1.2	If yes, Confirm the description on the analysis for the CPA.	CPA GL	NA	
<b>B.2.</b>	<b>Environmental impact assessment</b>			
B.2.1	Confirm if the EIA is required or not.	CPA GL	OK	
B.2.2	If EIA required, Confirm the conclusions of EIA is provided.	CPA GL	Tbv	CAR-2
B.2.3	Confirm that the EIA is required by the host Party, in accordance with the host Party’s procedures.	VVS Para. 135	OK	
B.2.4	Confirm that the requirement for the EIA is confirmed by means of a document review and/or using local official sources and expertise.	VVS Para. 136	No	CAR-2
<b>Section C.</b>	<b>Local stakeholder comments</b>			
<b>C.1.</b>	<b>Solicitation of comments from local stakeholders</b>			
C.1.1	Confirm that the invitation process is provided on local stakeholders comments for the CPA.	CPA GL	OK	
C.1.2	Confirm that the PP has completed a local stakeholder consultation process.	VVS Para. 138	OK	
C.1.3	Confirm that the due steps were taken to engage stakeholders and solicit comments for the PA.	Para. 138	OK	
C.1.4	Confirm, by means of document review and interviews with local stakeholders as appropriate, that : (a) comments have been invited from local stakeholders that are relevant for the PA.	VVS Para. 139	OK	
<b>C.2.</b>	<b>Summary of comments received</b>			
C.2.1	Confirm that the summary is provided on stakeholders comments.	CPA GL	OK	
C.2.2	Confirm, by means of document review and interviews with local stakeholders as appropriate, that : (a) comments have been invited from local stakeholders that are relevant for the PA.	VVS Para. 139	OK	
<b>C.3.</b>	<b>Report on consideration of comments received</b>			
C.3.1	Confirm that the consideration is provided for all comments received.	CPA GL	OK	
<b>Section D.</b>	<b>Eligibility of CPA and estimation of emissions reductions</b>			
<b>D.1.</b>	<b>Title and reference of the approved baseline and monitoring methodology(ies) selected</b>			
D.1.1	Confirm that the following reference of the <b>methodology</b> is exact. (i) reference number of the methodology. (ii) title of the methodology. (iii) version number of the methodology Confirm that the following reference of the <b>Tool</b> is exact. (i) title of the Tool	CPA GL CPA GL CPA GL CPA GL CPA GL CPA GL	OK OK OK OK OK OK	

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:** To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**Table-2 Requirements Checklist (PoA) for CPA-DD-Specific**

PoA-DD Section	Check Points (according to EB 66 Annex 16 “ Guidelines for Completing The Component project Activity Design Document Form”(Ver.01.0)	Reference GL, DD	(OK/No/NA/Tbv) Check Comment	CAR, CL, No.
	(ii) version number of the Tool	CPA GL	OK	
<b>D.2.</b>	<b>Application of methodology(ies)</b>			
D.2.1	Confirm that the description is provided on demonstration of compliance for applicability conditions of methodology.	CPA GL	OK	
<b>D.3.</b>	<b>Sources and GHGs</b>			
D.3.1	Confirm that the description is provided in the table on the sources and GHGs in generic CPA boundary.	CPA GL	No, Tbv	CAR-3
<b>D.4.</b>	<b>Description of the baseline scenario</b>			
D.4.1	Confirm that the description is provided on how the baseline scenario is identified for the CPA.	CPA GL	No, Tbv	CL-2, CL-8
<b>D.5.</b>	<b>Demonstration of eligibility for a CPA</b>			
D.5.1	Confirm that the description is provided on how specific CPA meets the eligibility criteria of the CPA.	CPA GL	No, Tbv	CL-3, 4, 5, 7, 8
<b>D.6.</b>	<b>Estimation of emission reductions</b>			
<b>D.6.1.</b>	<b>Explanation of methodological choices</b>			
D.6.1.1	Confirm that the description is provided on how the methodological steps, in the selected methodology, are applied to specific CPA.	CPA GL	OK	
<b>D.6.2.</b>	<b>Data and parameters that are to be reported ex-ante</b>			
D.6.2.1	Confirm that the description is provided on the data and parameters not for monitoring in the Tables.	CPA GL	No, Tbv	CL-9, 10, 11
<b>D.6.3.</b>	<b>Ex-ante calculation of emission reductions</b>			
D.6.3.1	Confirm that the ex-ante calculation is provided on emission reductions.	CPA GL	No, Tbv	CAR-4 CL-1 CL-12,13 CL-14,16,17
<b>D.6.4.</b>	<b>Summary of the ex-ante estimates of emission reductions</b>			
<b>D.7.</b>	<b>Application of the monitoring methodology and description of the monitoring plan</b>			
<b>D.7.1.</b>	<b>Data and parameters to be monitored</b>			
D.7.1.1	Confirm that the description is provided on the data and parameters for monitoring in the Tables.	CPA GL	OK	
<b>D.7.2.</b>	<b>Description of the monitoring plan</b>			
D.7.2.1	Confirm that the description is provided on the monitoring plan for a specific CPA.	CPA GL	No, Tbv	CL-18
<b>Section E.</b>	<b>Approval and authorization</b>			

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

**NA:** Not Applicable, **Tbv:**To be verified, **PDD GL:** PDD Guidelines, **PA:** Project Activities, **PP:** Project Participants

**Table-2 Requirements Checklist (PoA) for CPA-DD-Specific**

		(OK/No/NA/Tbv)		
PoA-DD Section	Check Points (according to EB 66 Annex 16 “ Guidelines for Completing The Component project Activity Design Document Form”(Ver.01.0)	Reference GL, DD	Check Comment	CAR, CL, No.
E.1.1	Confirm whether the LoA is available at the time of submitting the CPA-DD to the DOE. If yes, Confirm that the LOA is provided with following information. (a) approval of the Party(ies) (b) authorization for CME from each Party.	CPA GL	No	later
		CPA GL	-	
Appendix 1	<b>Contact information on entity/individual responsible for the CPA</b>			
	Confirm that the following mandatory fields are filled in the table. <ul style="list-style-type: none"> <li>♦ Organization</li> <li>♦ Street/P.O. Box</li> <li>♦ City, Postcode</li> <li>♦ Country, Telephone</li> <li>♦ Fax,</li> <li>♦ e-mail</li> <li>♦ Name of contact person</li> </ul> Confirm the consistency between the organization listed in above table and that in section A.4.	CPA GL	OK	
			OK	
			OK	
			OK	
			OK	
			OK	
			OK	
			OK	
		CPA GL	OK	
Appendix 2	<b>Affirmation regarding public funding</b>			
	Confirm the description on no public funding from Parties for CPA. If public fund has received for CPA, (a) Provide information on Parties providing public funding; (b) Attach in Appendix 2: the affirmation obtained from such Parties	CPA GL	OK	
		CPA GL	NA	
Appendix 3:	<b>Applicability of the selected methodology(ies)</b>			
	Provide any further background information on the applicability of the selected methodology(ies).	CPA DD	NA	
Appendix 4:	<b>Further background information on ex ante calculation of emission reductions</b>			
	Provide any further background information on the ex ante calculation of emission reductions. This may include data, measurement results, data sources, etc.	CPA DD	NA	
Appendix 5:	<b>Further background information on the monitoring plan</b>			--
	Provide any further background information used in the development of the monitoring plan. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.	CPA DD	NA	



**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
<b>CAR Corrective Action Requests</b>				
		<b>PART I</b>		
<b>CAR-1</b>	LoAs from Parties (Ghana & UK) shall be submitted.	Section-G	<p>Procedure is on-going.</p> <p><u>6th September 2012</u> United Kingdom has been removed from the table A.4 (Parties) thus only Ghana LoA is still needed. LoA of Ghana issued on 16 September 2012 has been provided.</p>	<p>OK</p> <p>It was confirmed that the LoA of Ghana issued on 16 September 2012 is authentic and credible.</p> <p>CAR-1 was resolved and closed out.</p>
<b>CAR-2</b>	MoC shall be submitted.	VVS Para. 60	<p>Procedure is on-going.</p> <p>12th September 2012 Please find attached the MoC.</p>	<p>OK</p> <p>It was confirmed in writing that it has performed due diligence on the MoC statement in accordance with VVS. CAR-2 was resolved and closed out.</p>
		<b>PART II</b>		
<b>CAR-3</b>	Landfill site shall be included in the project boundary according to AM0025.	B.3	<p>Landfill site has been included in the project boundary according to AM0025 in Figure 7 of the revised PoA-DD.</p> <p><u>3<sup>rd</sup> August 2012</u> Figure 8 has been updated in order to have landfill site included in project boundary.</p>	<p>OK</p> <p>Landfill site is included in the Project Scenario, but not included in the Project boundary. It is requested to revise the Project boundary including Landfill site.</p> <p>It was confirmed in Figure 8 landfill site was included in the project boundary.</p> <p>CAR-3 was resolved and closed out.</p>
<b>CL Clarification Requests</b>				
		<b>PART I</b>		

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
<b>CL-1</b>	National Environmental Sanitation Strategy and Action Plan shall be submitted.	A.2.(a)	Please refer to document #11 (“PoA bibliography” in the .zip package) for the document “Ministry of Local Government and Rural Development. (2010, 10). National Environmental Sanitation Strategy and Action Plan 2010-2015.pdf”	OK It was confirmed that the target of composting 50% of biodegradable organic fraction of MSW was set in the National Environmental Sanitation Strategy.  CL-1 was resolved and closed out.
<b>CL-2</b>	Numbers for Estimated population of Accra shall be inserted	PoA P.8	Numbers for Estimated population of Accra has been inserted.	OK Population of Accra 3 million was appropriately inserted.  CL-2 was resolved and closed out.
<b>CL-3</b>	SSC-CPA is requested to delete SSC	PoA P.1, 11, 12, 13, 14, 15	“SSC” has been deleted.	OK “SSC” was deleted appropriately.  CL-3 was resolved and closed out.
<b>CL-4</b>	It is requested to clarify whether Standard Bank Plc is the PP of Ghana (host).	A.4.	Yes, as mentioned in section A.4, Standard Bank Plc is the project participant.	OK It was confirmed that Standard Bank Plc is CME and also the PP as a CER buyer.  CL-4 was resolved and closed out.

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-5	Environmental Sanitation Policy and landfill guidelines shall be provided.	B.1.	<p>Please refer to document #10 (“PoA bibliography” in the .zip package) for the document “Environmental Sanitation policy (Revised 2010).pdf”</p> <p>Please refer to document #9 (“PoA bibliography” in the .zip package) for the document “Ministry of Local Government &amp; Rural Development - EPA. (May 2002). Landfill Guidelines.pdf”</p>	<p>OK Received and reviewed.</p> <p>It was confirmed that composting plants will contribute to the achievement of the stated goal in the Environmental Sanitation Policy of Ghana.</p> <p>Also, it was confirmed that composting plant from MSW is barely mentioned in the Landfill Guidelines.</p> <p>CL-5 was resolved and closed out.</p>
CL-6	Category of eligibility criteria shall be clarified in accordance with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoAs” (“PoA Standard”).	B.2.	<p>Table 2 with eligibility criteria has been modified.</p> <p><b><u>3rd August 2012</u></b> All items ((a) to (1)) of the eligibility criteria in Para. 14 of “PoA Standard” are mentioned. Items not applied for this PoA, are mentioned as N.A.</p>	<p>OK All items ((a) to (1)) of the eligibility criteria in Para. 14 of “PoA Standard” shall be mentioned. Even if any item is not applied for this project, it shall be mentioned as N.A. not deleted the item.</p> <p>All items ((a) to (1)) of the eligibility criteria in Para. 14 of “PoA Standard” and additional items have been mentioned appropriately..</p> <p>CL-6 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-7	The management system is requested to clarify all items ((a) to (g)) according to Para. 17 of “PoA Standard”.	C	<p>All items (a) to (g) according to Para 17 of “PoA Standard” have been clarified in PoA-DD.</p> <p><b><u>5th September 2012</u></b> Item (b) has been clarified in PoA-DD in section C. Numbering /order of items (a) to (g) have been revised to be consistent with the guidelines.</p>	<p>OK It was confirmed all items except item (b) have been mentioned appropriately in Section C. Item (b) shall be clarified.</p> <p>It was confirmed item (b) has been mentioned appropriately.</p> <p>CL-7 was resolved and closed out.</p>
CL-8	“Yes” regarding “No similar CPA already submitted as CPA under another PoA or CDM project” in Table 3 of PoA-DD shall be clarified.	C	<p>Table 3 in Section C has been modified accordingly</p> <p><b><u>3rd August 2012</u></b> Table 3 has been corrected appropriately. “No” to “False”</p>	<p>OK Table 3 shall be corrected appropriately. “No” to “False”</p> <p>Table 3 has been corrected appropriately.</p> <p>CL-8 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-9	<p>The following evidences shall be submitted.</p> <ol style="list-style-type: none"> <li>1) Environmental Assessment Regulations, L.I. 1652 (1999)</li> <li>2) Regulations, L.I. 1652 (1999)</li> <li>3) Environmental Assessment Regulation (Amendment) L.I. 1703 (2002)</li> <li>4) Factories, Offices and Shops Act of 1970 (Act 328)</li> </ol>	E2	<ol style="list-style-type: none"> <li>1) Please refer to document #2 ("PoA bibliography" in the .zip package) for the document "Environmental Assessment Regulations, L.I. 1652 (1999)".</li> <li>2) "Regulations, L.I. 1652 (1999)" has been removed from the PoA-DD as it refers to "Environmental Assessment Regulations, L.I. 1652 (1999)".</li> <li>3) Please refer to document #3 ("PoA bibliography" in the .zip package) for the document "Environmental Assessment Regulation (Amendment) L.I. 1703 (2002)".</li> <li>4) Please refer to document #1 ("PoA bibliography" in the .zip package) for the document "Factories, Offices and Shops Act of 1970 (Act 328)"</li> </ol>	<p>OK Received and reviewed. It was confirmed that the regulations require that all projects in Ghana comply with the EIA procedures in planning, implementation, operation and decommissioning phases of the projects.</p> <p>CL-9 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-10	It is requested to correct Start date of PoA from 01.10.2012 to 25.04.2012(GSC)	D.1.	<p>We think that this CL is not relevant. Please provide more explanation if deemed necessary.</p> <p><b>3rd August 2012</b> PoA-DD has been modified as follows: “The PoA start date is set at 01/04/2013 (starting date of crediting period) or the date of inclusion of the first CPA, whichever is later. This is in line with the start date of the crediting period for first CPA which is set at 01/04/2013.</p> <p>PS: GSC of the PoA starts on 25/04/2012. The starting date of first CPA is set at 29/06/2012 (date of equipment order).”</p> <p>This is in line with the CDM Standard and with the last PoA registered (e.g.: PoA 5272 : CFL Distribution Programme in Jiangsu Province has been registered in June 2012. The starting date chosen for this PoA is the same as the starting date of the crediting period for first CPA).</p> <p><b>4th October 2012</b> PoA start date has been changed to 01/01/2013 (expected date of commissioning of the first CPA)</p>	<p>OK Start date of GSC for PoA (25/04/2012) is before the start date of CPA (29/06/2012 in the CPA-DD /4/).</p> <p>It was confirmed that the Start date of PoA (PoA lifetime) is set at 01/04/2013 (the crediting start date of CPA001) appropriately.</p> <p>CL-10 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-11	It is requested to clarify to use the sampling method in AM0025. (Eligibility criteria (j) )	B.2.	<p><b><u>5th September 2012</u></b></p> <p>It has been clarified to use the sampling method in AM0025 version 13. (Eligibility criteria (j)).</p> <p><b><u>6th September 2012</u></b></p> <p>It has been clarified for eligibility criteria j that the following parameters <math>z_x</math>, <math>ECC_{CH_4,c}</math>, <math>ECC_{N_2O,c}</math> and <math>[p_{n,j,x} \text{ or } p_{n,j,i}]</math> if applied in CPA should use the sampling method in AM0025 version 13.0.0 and referred tools.</p> <p><b><u>12<sup>th</sup> September 2012</u></b></p> <p>The “Tool to determine the mass flow of a greenhouse gas in gaseous stream” (Version 2.0.0). has been added in section B.1 Part II.</p>	<p>OK</p> <p>It shall be clarified which parameters (monitoring items) are applied to the sampling method.</p> <p><math>ECC_{CH_4,c}</math> and <math>ECC_{N_2O,c}</math> are applied according to “Tool to the determine the mass flow of a greenhouse gas in a gaseous stream”. Therefore, this tool shall be added to Section B. 1. of PART II.</p> <p>The Tool was added in section B.1 Part II.</p> <p>CL-11 was resolved and closed out.</p>
CL-12	Records of arrangements for training and capacity development for personnel (Management system (b)) shall be clarified.	B.2.	<p><b><u>5th September 2012</u></b></p> <p>Item (b) has been clarified in PoA-DD in section C. Numbering /order of items (a) to (g) have been revised to be consistent with the guidelines.</p>	<p>OK</p> <p>It was confirmed item (b) has been mentioned appropriately.</p> <p>CL-12 was resolved and closed out.</p>
		<b>PART II</b>		



**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
<b>CL-13</b>	Category of eligibility criteria shall be clarified in accordance with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoAs”(“PoA Standard”).	B.5.	<u><b>3rd August 2012</b></u> Demonstration of eligibility for a generic CPA has been clarified in accordance with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoAs” (“PoA Standard”). It has been added that “To be eligible, the CPA shall comply with all eligibility criteria provided above in table 2.”	OK All items of eligibility criteria were mentioned in the generic CPA appropriately.  CL-13 was resolved and closed out.
<b>CL-14</b>	Uniform to left the letter string	B. 6.1, 6.2, B.7.1	The PoA-DD has been modified accordingly.	OK PoA-DD has been modified appropriately. CL-14 was resolved and closed out.

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (PoA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-1	Summary of project owner response	Validation team Conclusion
CL-15	It shall be clarified that the data of 2010 for calculation of BM and OM is not available. Active spread sheets of calculation for BM and OM shall be provided.	Appendix 4	<p>Grid emission factor calculation has been updated with 2010 data. Active spread sheets of calculation for BM and OM are provided in the .zip folder</p> <p><b><u>3rd August 2012</u></b> The name of official data sources 2010 is “Energy commission” of Ghana. It is mentioned in the PoA-DD section “B.6.2. Data and parameters that are to be reported ex-ante” in the table referring to the parameter CEFelec (source of value applied) and CPA-DD accordingly.</p> <p>The mail containing the data used for the calculation of BM and OM received from Kennedy Amankwa Chief Programme Officer, Energy Efficiency &amp; Climate Change, of the Ghanaian Energy Commission is provided in zip folder. Data provided are consistent with National Energy Statistics Report (2000-2010) provided in the zip folder and available online at <a href="http://new.energycom.gov.gh/downloads/STATISTICS%2000-2010.pdf">http://new.energycom.gov.gh/downloads/STATISTICS%2000-2010.pdf</a>.</p>	<p>OK The active spread sheets have been provided. However, the name of the official data sources 2010 is not mentioned.</p> <p>It was confirmed that the name of official data sources 2010 and evidences were provided. And active spread sheets calculation was confirmed appropriateness.</p> <p>CL-15 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
<b>CAR Corrective Action Requests</b>				
<b>CAR-1</b>	Start date of the CPA is 20/4/2012. However, start date for GSC of PoA is 25 April 2012. Start date of the CPA shall be after GSC of PoA. Evidence on equipment and structures order shall be provided. Start date shall be decided in accordance with the Glossary of CDM Terms (Version 06.0).	A.8.1	Start date of the CPA has been modified as follow: "Start date of the CPA is 29/06/2012: expected date for the placement of equipment and structures order. Therefore the starting date of the CPA is after GSC of PoA.	OK The start date of the CPA was defined (29/06/2012) appropriately.  CAR-1 was resolved and closed out.
<b>CAR-2</b>	EIA report shall be provided.	B.2	PENDING. EIA is on-going (expected date of EIA approval: end September-Beginning October)  <b>12th September 2012</b> Please refer to the EIA report provided in the .zip package.	OK EIA (ESIA) report was confirmed appropriate. And, satisfactory letter of it by EPA has been provided.  CAR-2 is resolved and closed out.
<b>CAR-3</b>	Landfill site shall be included in the project boundary according to AM0025.	D.3	Landfill site has been included in the project boundary according to AM0025 in Figure 2 of the revised CPA-DD.  <b>3rd August 2012</b> Figure 2 has been updated in order to have landfill site included in project boundary.	OK Landfill site is included in the Project Scenario, but not included in the Project boundary. It is requested to revise the Project boundary including Landfill site.  Landfill site has been included in the project boundary in Figure 2 appropriately.  CAR-3 is resolved and closed out.

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv:To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CAR-4	Active spread sheets for CER calculation shall be provided.	D.6.3	<p>Active spread sheets for CER calculation are provided in the .zip folder.</p> <p><b>3rd August 2012</b> The name of official data sources 2010 is “Energy commission” of Ghana. It is mentioned in the PoA-DD section “B.6.2. Data and parameters that are to be reported ex-ante” in the table referring to the parameter CEF<sub>elec</sub> (source of value applied) and CPA-DD accordingly.</p> <p>The mail containing the data used for the calculation of BM and OM received from Kennedy Amankwa Chief Programme Officer, Energy Efficiency &amp; Climate Change, of the Ghanaian Energy Commission is provided in zip folder. Data provided are consistent with National Energy Statistics Report (2000-2010) provided in the zip folder and available online at <a href="http://new.energycom.gov.gh/downloads/STATISTICS%202000-2010.pdf">http://new.energycom.gov.gh/downloads/STATISTICS%202000-2010.pdf</a></p>	<p>OK</p> <p>The base data for grid emission factor (OM, BM) has been changed from 2007-2009 to 2008-2010 and emission reduction calculation has been modified appropriately by using the revised CEF<sub>elec</sub>.</p> <p>CAR-4 was resolved and closed out.</p>
<b>CL Clarification Requests</b>				
CL-1	The inconsistency between A.10 emission reduction calculation and B.6.4 emission reduction calculation shall be clarified.	A.10, D.6.3. D.6.4.	<p>The inconsistency between A.10 emission reduction calculation and B.6.4 emission reduction calculation has been clarified.</p> <p><b>3rd August 2012</b> Emission reduction calculation is clarified with details calculation in section D.6.4.</p>	<p>OK</p> <p>The inconsistency was resolved, however, emission reduction calculation shall be again clarified, especially project emission (PE<sub>EC,y</sub>). For example, 2015:  <math>((72,000 \times 0.01) \times 0.9 \times 0.4732 + (72,000 \times 0.01) \times 0.1 \times 1.3) \times 1.2 = 480</math></p> <p>It was confirmed that the data of 2015 was changed appropriately as below;  <math>((71,910 \times 0.01) \times 0.9 \times 0.4732 \times 1.2 + (71,910 \times 0.01) \times 0.1 \times 1.3) = \underline{461}</math></p> <p>CL-1 was resolved and closed out.</p>

**CAR:** Corrective Action Request, **CL:** Clarification Request, **FAR:** Forward Action Request,

NA: Not Applicable, Tbv: To be verified, PDD GL: PDD Guidelines, PA: Project Activities, PP: Project Participants

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-2	GOAN and Sustainable Sanitation Alliance c/o GmbH, 2011 shall be provided as evidences.	D.4.	<p>Please refer to document #8 (“PoA bibliography” in the .zip package) for the GOAN document “Mensah, A., &amp; Larbi, E. (2005). FACT SHEET Solid Waste Disposal (SWD) in Ghana . Kumasi Metropolitan Assembly, Waste Management Department, Kumasi.”</p> <p>Please refer to document #16 (“PoA bibliography” in the .zip package) for the document “Sustainable Sanitation Alliance. (2011, 06). Compilation of 27 case studies on sustainable sanitation projects from Sub-Saharan Africa.pdf”</p>	<p>OK Received and reviewed.</p> <p>It was confirmed that composting plants in Ghana have been either closed or scale down and now operate far below their planned capacity by evidences and on-site survey.</p> <p>CL-2 was resolved and closed out</p>
CL-3	Category of eligibility criteria shall be clarified in accordance with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoAs”(“PoA Standard”).	D.5.	<p><b><u>3rd August 2012</u></b></p> <p>Demonstration of eligibility for a generic CPA has been clarified in accordance with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoAs”(“PoA Standard”).</p> <p>It has been added that “To be eligible, the CPA shall comply with all eligibility criteria provided above in table 2.”</p>	<p>OK</p> <p>All items ((a) to (l)) of the eligibility criteria in Para. 14 of “PoA Standard” and additional items have been mentioned appropriately..</p> <p>CL-3 was resolved and closed out.</p>
CL-4	SSC-CPA is requested to delete SSC	D.5.	“SSC” has been deleted.	<p>OK</p> <p>“SSC” has been deleted appropriately.</p> <p>CL-4 was resolved and closed out.</p>
CL-5	Binding agreement signed by CPA implementer and the CME shall be provided.	D.5.	<p><b><u>3rd August 2012</u></b></p> <p>Please refer to the extract of ERPA between Standard Bank and Zoomlion provided in the .zip folder</p>	<p>OK</p> <p>It was confirmed that the binding agreement between Standard Bank and Zoomlion is included in the ERPA.</p> <p>CL-5 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-6	Supporting documentary evidence for the starting date shall be provided.	A.8.1.	<u>3<sup>rd</sup> August 2012</u> Contract for equipment order is provided in the .zip folder.	OK The contract for equipment order dated 29 June 2012 was confirmed with the evidence.  CL-6 was resolved and closed out.
CL-7	Technical review report drafted by the CME shall be provided.	D.5.	3rd August 2012 PENDING – Will be provided when the new version of the table with eligibility criteria will be validated by JCI.  <u>5<sup>th</sup> September 2012</u>  CPA001 assessment inclusion request is provided and will be signed by the CME when validated by JCI.	OK  Technical review report of CPA001 was provided and the contents was confirmed appropriate.  CL-7 was resolved and closed out.

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-8	It is requested to undertake the Common practice Analysis in detail in accordance with Additionality Tool.	D.4. D.5.	<p>According to the Additionality Tool, common practice analysis is not required for Foik project.</p> <p><b>3<sup>rd</sup> August 2012</b> Commissioning of Adjen Kotoku composting plant is expected in 15 October 2012 as written in a statement of plant's manager</p> <p><b>5th September 2012</b> An article from the official portal of the Government of Ghana dated of Monday 9th July 2012 and entitled “<i>Ministry of Environment, Science and Technology Registers First Ever Clean Development Mechanism</i>” indicates about Adjen Kotoku composting plant “the plant was inaugurated in the second quarter of 2012 and will start to produce and sell [...] in the upcoming weeks”. This articles confirms the fact that no similar composting plant was operational in Ghana neither at the time of CPA-DD publication for GSC (April 2012) nor at the time of project sart date (end of June 2012). Thus, this article confirms the Foik characterer of the project. <a href="http://www.ghana.gov.gh/index.php/information/press-releases/14263-mest-registers-first-ever-clean-development-mechanism-in-ghana">http://www.ghana.gov.gh/index.php/information/press-releases/14263-mest-registers-first-ever-clean-development-mechanism-in-ghana</a></p>	<p>OK The criteria of the relevant region should be defined as whole Ghana country. So, Kumasi and Accra should be considered as the same region. One similar activity, Zoomlion Ghana Composting of MSW in Accra area registered as CDM, can be observed in Accra. The start date of the project CPA001 is 29 June 2012, so it is requested to check the start date of commercial operation of Zoomlion Ghana Composting of MSW in Accra area registered as CDM.</p> <p>It was confirmed that the start date of CPA001 is before the start date of commercial operation of Zoomlion Ghana Composting of MSW in Accra area (Start date of operation will be expected on 15 October 2012 by the written statement of plant manager), so CPA001 is Foik.</p> <p>CL-8 was resolved and closed out.</p>
CL-9	CDM-PDD shall be changed to PoA-DD.	D.6.2	CDM-PDD has been changed to CPA-DD.	<p>OK The appropriateness of change was confirmed.</p> <p>CL-9 was resolved and closed out.</p>



**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-10	Management of SWDS (Dompoase) shall be clarified.	D.6.2	The name has been be changed to KMA SWDS (Oti).	OK The appropriateness of change was confirmed.  CL-10 was resolved and closed out.
CL-11	Average temperature and rainfall shall be clarified.	D.6.2	The following information has been added to the CPA-DD for parameters $\phi_{\text{default}}$ and kj: “source: World Climate Weather station KUMASI is at about 6.72°N 1.60°W. Height about 287m / 941 feet above sea level. Temperatures: <a href="http://www.worldclimate.com/cgi-bin/data.pl?ref=N06W001+1102+65442W">http://www.worldclimate.com/cgi-bin/data.pl?ref=N06W001+1102+65442W</a> Rainfall: <a href="http://www.worldclimate.com/cgi-bin/data.pl?ref=N06W001+2100+65442W">http://www.worldclimate.com/cgi-bin/data.pl?ref=N06W001+2100+65442W</a> ”	OK It was confirmed that average temperature is 25.7°C and average rainfall is 1,432.3 mm. in Kumasi by the World Climate Weather station KUMASI.  CL-11 was resolved and closed out.
CL-12	720MWh of electricity consumption shall be clarified.	D.6.3	This figure has been calculated in accordance with the tool applied which uses a default value ( $\text{SEC}_{\text{comp,default}}$ ) based on treated waste. Therefore actual figures for electricity consumption are not necessary.	OK It was confirmed that the equation (3) in the “Methodological Tool Project and leakage emissions from composting” is applied and $\text{EC}_{\text{pj, comp,y}}$ may be determined based on a default value for the specific quantity of electricity consumed per tonne of waste composed ( $\text{SEC}_{\text{comp,default}}=0.01$ )  CL-12 was resolved and closed out.

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-13	Emissions from wastewater treatment shall be clarified.	D.6.3	As indicated in the section A.5, “No runoff wastewater is foreseen as it will be pumped back for compost spraying.” therefore emissions from wastewater is not expected.	OK It was confirmed that the wastewater shall be used as a pumping back for compost spraying, so it can be considered as an aerobic treatment process. Therefore, PE <sub>wy</sub> shall be assumed zero.  CL-13 was resolved and closed out.
CL-14	Emissions from transportation shall be clarified.	D.6.3	As indicated in section D.6.1, “Transport emissions are not accounted for because it is assumed that similar transportation activities would occur in the baseline”. This is in line with the page 2 of the Methodological Tool “Project and leakage emissions from composting” (Version 01.0.0)	OK As the project is exclusively composting, L <sub>y</sub> equals L <sub>comp,y</sub> according to AM0025. And it was confirmed that compost is used as a cover for a SWDS and this is not accounted for as a source of leakage emissions according to the .Methodological Tool “Project and leakage emissions from composting”.  CL-14 was resolved and closed out.
CL-15	Project timeline shall be provided.	-	The project timeline has been provided to JCI during the on-site audit. Please refer to the document “Time outline.pdf” provided in the .zip folder.	OK The project timeline has been provided and reviewed the appropriateness.  CL-15 was resolved and closed out.



**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
			<p><b>2) <u>Waste quantity before sorting:</u></b>  The capacity of the sorting plant is 300 tonnes per shift and it is supposed to run for 2 shifts of 8 hours per day, 25 days per months, thus its daily capacity is 600 tonnes of waste. For the first 9 months of operation in 2013, the sorting and composting plant will run with a 36% load factor meaning that the composting plant will treat each day 102 tonnes of organic waste. For the year 2014, the composting plant is supposed to step up to a 56% load factor meaning that it will treat 158 tonnes/day of organic waste. For the subsequent years it will run with a 85% load factor, thus treat 240 tonnes/day of organic waste.</p> <p>Out of this nominal treatment capacity of 600 tonnes/day in 2 shifts, 300 days per year and based on an organic fraction of 47%, for 2013 the project proponent expects <math>600 \times 36\%</math>  <math>300 \times 47\% = 30,456</math> tonnes/y (annual equivalent thus 22,842 for 9 months), for 2014: <math>600 \times 56\% \times 300 \times 47\% = 47,376</math> tonnes/y and after 2015: <math>600 \times 85\% \times 300 \times 47\% = 71,910</math> tonnes/y.</p> <p>Regarding the organic fraction, a correcting factor so called “Sorting efficiency” of 95% was conservatively applied for taking into consideration the fact that process of sorting is not 100% efficient and can result in losses of organic matters based on recent literature : Realization of the Mass Balance in the Production of Compost in Developing Countries a Comparative Study (2012, Aina,M &amp; al).</p>	<p>2) The value of nominal capacity of composting plant shall be clarified. And the sorting efficiency of 95% shall be clarified.</p> <p>The value of nominal capacity of composting plant (600tonnes/day) and sorting efficiency of 95% were confirmed appropriate by evidence.</p> <p>Section A.5. and D.6.3. of CPA-DD has been revised appropriately.</p> <p>CL-16 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**

No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-17	Quantity of compost generated shall be clarified.	D.6.3.	<p><b><u>5th September 2012</u></b></p> <p>Regarding CPA001, the quantity of compost generated is estimated conservatively at 40% of wastes mass entering the composting plant in based on the most recent relevant publication : Carbon, nutrient, and mass loss during composting (2000, Department of Food, Agricultural, and Biological Engineering, The Ohio State University) p.20, where mass losses are reported from 37 to 52%. This value was also used in the first PDD registered by Zooliom in Ghana.</p> <p>Quantity of compost generated should be monitored and it has been clarified in PoA-DD as well as CPA-DD with the parameter Mcompost.</p>	<p>OK</p> <p>It was confirmed that the quantity of compost generated is estimated conservatively at 40% of waste mass entering the composting plant with evidence.</p> <p>CL-17 was resolved and closed out.</p>

**TABLE-3 Resolution of Corrective Action Requests, Clarification Requests and Forward Action Requests (CPA-DD)**



No. CAR, CL	Clarifications and corrective action requests by validation team	Sec. No. in TABLE-2	Summary of project owner response	Validation team Conclusion
CL-18	The ability of monitoring organization of ZOOMLION GHANA LTD shall be clarified.	D.7.2.	<p><b>5th September 2012 (CPA-DD)</b></p> <p>An article from the official portal of the Government of Ghana dated of Monday 9th July 2012 and entitled “Ministry of Environment, Science and Technology Registers First Ever Clean Development Mechanism” indicates about Adjen Kotoku composting plant operated by ZOOMLION GHANA LTD “the plant was inaugurated in the second quarter of 2012 and will start to produce and sell [...] in the upcoming weeks”. This article demonstrates that ZOOMLION GHANA Ltd team will improve its skills and abilities in the upcoming months regarding the operation of composting plants thanks to the commissioning of the first large scale composting of Ghana in Accra. After several months of operation of Adjen Kotoku composting plant, ZOOMLION GHANA Ltd team will use this return on experience when Kumasi composting plant will start operation.</p> <p><a href="http://www.ghana.gov.gh/index.php/information/press-releases/14263-mest-registers-first-ever-clean-development-mechanism-in-ghana">http://www.ghana.gov.gh/index.php/information/press-releases/14263-mest-registers-first-ever-clean-development-mechanism-in-ghana</a></p> <p>Moreover, article “Ghana:Zoomlion Starts Sanitation &amp; Waste Institute” (3 September 2012) (provided to the DOE) reports the collaboration of Zoomlions with University of Western Ontario, Canada and Bennedict College, South Carolina University, United States for courses in sanitation and waste management. “The objectif is to build capacity and provide requisite skills in Waste management”. “Zoom alliance would...facilitate the acquisition and management of technical, material human resources through the provision of personnel and equipment”. This confirms the ability of ZOOMLION GHANA Ltd to conduct the monitoring plan properly.</p> <p>Records of arrangements for training and capacity development for personnel is described in CPA-DD section D.7.2.</p> <p>Please also note that Monitoring organization has been clarified in section E7.2 PoA-DD with additional figure (monitoring flowchart) and corrections.</p>	<p>OK</p> <p>It was confirmed that ZOOMLION GHANA LTD will operate the composting plant in Accra as a CDM, which is the first large composting plant in Ghana, from September 2012 and this experience will be used in CPA001 of Kumasi composting plant.</p> <p>Therefore, it was confirmed that the ability of monitoring organization is sufficient.</p> <p>CL-18 was resolved and closed out.</p>

CA: Corrective Action Request, CL: Clarification Request, FAR: Forward Action Request.

	JCI CDM Center	Appendix A	<b>CDM (PoA) Validation Protocol for Standard Bank MSW Composting Programme</b>	<b>JCI-CDM-VAL-11/172 Revision 03.2</b>
----------------------------------------------------------------------------------	----------------	------------	---------------------------------------------------------------------------------	---------------------------------------------



**APPENDIX B****Certificate of Appointment of Validation Team**

Project Title	Standard Bank MSW Composting Programme
Applied Methodology	AM0025 Sectoral Scope 1, 13
Date: 9 May 2012	
<b>Designated Operational Entity: Japan Consulting Institute (JCI)</b>	
<p>Reflecting the competence criteria of JCI, this is to certify the appointment of validation team of JCI specified below for the CDM project activity above, as per CDM Project Activity Registration Form, "F-CDM-REG" adopted at the 24th Meeting of CDM Executive Board, and Validation Procedure established by JCI CDM Center.</p> <p style="text-align: right;">               Signature _____              Akio Yoshida,              Executive Director, JCI CDM Center           </p>	
<b>Client: Standard Bank Plc</b>	
<p>Reflecting the curricula vitae provided, this is to agree the validation team of JCI specified below for the CDM project activity above, as per Validation Procedure established by JCI CDM Center.</p> <p>It is also agreed that Mr. Mutsuo KATO of JCI participates in the validation activities of the said project for the quality issues under its quality management scheme.</p> <p style="text-align: right;">Date: 9 May, 2012</p> <p style="text-align: right;">               Signature _____              (Name) G. SWANA              (Title) HEAD OF CARBON SALES &amp; TRADING           </p>	

**Validation Team**

Validation Team	Name	Assigned Role
Leader	Hideyuki Sato	All relevant issues (TA: 1.1, 13.1)
Member	Masaki Okada	CDM auditor (TA: 1.1, 13.1)
Member	Toshiaki Takeda	CDM auditor (TA: 1.1, 13.1)

Technical Reviewer	Shigeo Aoki	Technical review (TA: 1.1, 13.1)
--------------------	-------------	----------------------------------