



POA VALIDATION REPORT

A&T CARBON ASSET CO., LIMITED

ANIMAL MANURE TREATMENT
PROGRAMME IN GANSU PROVINCE

Report No: 8000399528 - 11/448

Date: 2012-12-23

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PoA Validation Report:	Report No. 8000399528 - 11/448	Rev. No. 0	Date of 1st issue: 2012-12-23	Date of this rev. 2012-12-23
PoA:	Title: <i>Animal Manure Treatment Programme in Gansu Province</i>		Initial PoA-DD Version: Version 04 2012-11-21	Final PoA-DD Version Version 05 2012-12-23
Project Participant(s):	Non-Annex 1 country: China		Annex 1 country: <i>United Kingdom of Great Britain and Northern Ireland</i>	
	PP from Non-Annex 1 country: <i>Lanzhou Hualong Poultry Breeding Co.</i>		PP from Annex 1 country: <i>A&T Carbon Asset Co., Limited</i>	
	Coordinating Managing Entity <i>Lanzhou Hualong Poultry Breeding Co.</i>			
Applied methodology/ies:	Title: Methane recovery in animal manure management systems		No.: AMS-III.D:	Scope / TA: 15/15.2
Validation team / Technical Review and Final Approval	Validation Team: LI Yongjun (TL) Walter Ulrich (TE) Yan Tao (TM)		Technical review: Stöhr Christina, Yu, Jean Winter, Stefan	Final approval: Saalman, Martin
Expected Emission reductions: [t CO₂e]	Expected emission reductions over the first crediting period: 21,161		(Expected) project starting date: 2013-02-01	
Confidential content:	<input type="checkbox"/> Yes		<input checked="" type="checkbox"/> No	
Key dates of validation:	Publication of PDDs: 1st GSP: Ver. 01 2011-09-14 2nd GSP: Ver.04 2012-11-23	Draft Report issued: 2012-11-30	On-site (from): 2011-11-14	On-site (to): 2011-11-18
Summary of Validation Opinion:	<p>In detail the conclusions can be summarised as follows:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The PoA is in line with all relevant host country criteria (China) and all relevant UNFCCC requirements for CDM. Project activity approvals have been obtained from host country DNA of China, the National Development and Reform Commission of the people's republic of China, vide the Letter of Approval dated 2012-02-22 (No. 3688). Letter of approval from Annex I country United Kingdom has been issued on 2012-04-02 vide official document by Environment Agency, which is confirmed as the DNA of United Kingdom. <input checked="" type="checkbox"/> The PoA additionality is sufficiently justified in the PoA-DD. <input checked="" type="checkbox"/> The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient. <input checked="" type="checkbox"/> The monitoring plan is transparent and adequate. <input checked="" type="checkbox"/> The calculation of the PoA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 21,161t CO₂e are most likely to be achieved within the (1st renewable) crediting period. <input checked="" type="checkbox"/> All information has been consistently applied in the generic CPA-DD form. <input checked="" type="checkbox"/> The conclusions of this report show, that the PoA, as it was described in the project 			



	documentation, is in line with all criteria applicable for the validation.	
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Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating / Managing Entity
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GSCP	Global Stakeholder Consultation Process
IPCC	Intergovernmental Panel on Climate Change
NWPG	Northwest Power Grid
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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1 OBJECTIVE / SCOPE

The purpose of aPoA validation is to have an independent third party assess the project design. In particular the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the programme design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the programme design including especially: the correct application of the methodology, the programme's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PoA-DD and other relevant supporting documents, to ensure that the proposed CDM programme activity meets all relevant and applicable CDM and PoA criteria.

The information included in

- the completed Clean Development Mechanism Programme of Activities Design Document Form (the "CDM-PoA-DD") incl.
 - Part A: Programme of activities (PoA) and
 - Part B: Generic component project activity (CPA)
- One completed real case CDM-CPA-DD (the "Real-Case CDM-CPA-DD"), and
- the relevant supporting documents

was reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Standard^{VVS/}, carried out a full assessment of all evidence to assess the compliance of the programme with the key areas as outlined in section VII. and VIII.F of the VVS (version 03.0, EB70) as well as the Standard for Demonstration of additionality, development of Eligibility Criteria and Application of Multiple Methodologies for Programme of activities^{POAS/}.

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

2 POADESCRIPTION

2.1 PoA Characteristics

Essential data of the PoA is presented in the following Table 2-1.

Table 2-1: PoA/ rcCPA Characteristics

Item	Data		
PoA title	Animal Manure Treatment Programme in Gansu Province		
1st CPA (real case) title	Animal Manure Treatment Programme in Gansu Province--CPA-0001		
PoA size	<input type="checkbox"/> Large Scale <input checked="" type="checkbox"/> Small Scale		
Programme Scope (according to UNFCCC sectoral scope numbers for CDM)	<input type="checkbox"/>	1	Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/>	2	Energy distribution
	<input type="checkbox"/>	3	Energy demand
	<input type="checkbox"/>	4	Manufacturing industries
	<input type="checkbox"/>	5	Chemical industry
	<input type="checkbox"/>	6	Construction
	<input type="checkbox"/>	7	Transport
	<input type="checkbox"/>	8	Mining/Mineral production
	<input type="checkbox"/>	9	Metal production
	<input type="checkbox"/>	10	Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/>	11	Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/>	12	Solvents use
	<input type="checkbox"/>	13	Waste handling and disposal
	<input type="checkbox"/>	14	Afforestation and Reforestation
	<input checked="" type="checkbox"/>	15	Agriculture
Applied Methodology(ies) Title and Version No.	AMS-III.D: methane recovery in animal manure management systems (version18)		
Technical Area(s)	15 Agriculture		
PoA Duration	28 years		
Starting date of crediting period for the PoA	2013-02-01 (or on the date of registration, whichever is later)		
CPA Crediting period	<input checked="" type="checkbox"/> Renewable Crediting Period (7 y) <input type="checkbox"/> Fixed Crediting Period (10 y)		
Start of crediting period of the 1 st (real case) CPA ¹	2013-02-01 (or on the date of registration, whichever is later)		
Estimated metric tCO ₂ equivalent reductions of the 1 st CPA over the first crediting period	Annual average	3,023 tCO ₂ e	
	Total estimation over the 1st crediting period	21,161tCO ₂ e	

¹As per the published POA-DD (version 04)

2.2 Involved Parties, Coordinating / managing entity(ies), Project Participants of the PoA and operators of individual CPAs

The following parties to the Kyoto Protocol and project participants are involved in this PoA (Table 2-2).

Table 2-2: PoA Parties and project participants

	Name of Party/ies	Name of the Entity/ies	Private or Public	CME
Host Country/ies	People's Republic of China	Lanzhou Hualong Poultry Breeding Co.	Public	<input checked="" type="checkbox"/>
Annex 1 Country/ies	United Kingdom of Great Britain and Northern Ireland	A&T Carbon Asset Co., Limited	Private	<input type="checkbox"/>

2.3 Characteristics of rcCPA

The details of the 1st(real case) CPA is (are listed) in table 2-3.

Table 2-3: Characteristics of rcCPA

No.	CPA Details
CPA No.:	0001
CPA title:	Animal Manure Treatment Programme in Gansu Province--CPA-0001
CPA Host Country / Region:	People's Republic of China/Gansu Province,
Operator / Implementer:	Baiyin Huang River Feed Co. Ltd.
CPA location / address:	Shuiquan Town, Pingchuan District, Baiyin City, Gansu Province, People's Republic of China
Geographical coordinates:	104.6982°E; 36.7764°N

2.4 Technical Programme Description

The PoA involves the replacement of anaerobic animal manure treatment system in livestock farm to achieve biogas recovery and destruction by combustion for gainful uses.

The manure from livestock farm(s), which would be left to decay anaerobically without methane recovery and destruction in baseline scenario, will be firstly collected and fed into an adjustment pool, until the designed fermentation proportion fulfils the designated specification, the manure will be then fed into anaerobic digester, in which, the organic matter will be converted into biogas under designed anaerobic conditions. The residue from the anaerobic treatment system will be collected for land application



Purification facility will be installed for desulfurizing and dewatering before feeding the biogas for further utilizations.

A biogas flaring system will be installed, in case of emergency, the biogas will be flared and no biogas will be vented directly to atmosphere.

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the PoA consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the following programme documents:
 - The **CDM-PoA-DD (incl. generic CDM-CPA-DD)**
 - the **Real-Case CDM-CPA-DD**
- Desk review of the abovementioned PDDs and supporting documents
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation

3.2 Contract review

To assure that

- the PoA falls within the scopes for which accreditation is held,
- the necessary competences to carry out the validation can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and 2 additional team members, as well as the Technical Review personnel were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence	Technical competence ⁴⁾	Host country Competence	On-site visit
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	LI Yongjun	TÜV NORD China	TL	SA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Yan Tao	TÜV NORD China	TM ^{A)}	LA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Walter, Ulrich	TÜV NORD Cert GmbH	TM ^{A)}	LA	<input checked="" type="checkbox"/>	15.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Winter, Stefan	TÜV NORD Cert GmbH	TR ^{B)}	SA	<input checked="" type="checkbox"/>	15.2	<input type="checkbox"/>	-
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	YU, Weiming	TÜV NORD China	OR ^{B)}	LA	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	-
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Stöhr, Christina	TÜV NORD Cert GmbH	TR ^{B)}	LA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	-
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Saalmann, Martin	TÜV NORD Cert GmbH	FA ^{B)}	SA	<input checked="" type="checkbox"/>	-	<input type="checkbox"/>	-

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

⁵⁾ In case of verification projects

A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

B) No team member

All team members contributed to the review of documents, the assessment of the programme activity and to the preparation of this report under the leadership of the team leader.

Technical Experts contributed to the assessment of special aspects of the programme activity, e.g. technical or host country aspects.

Statements of competence for the above mentioned team members are enclosed in annex 8 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PoA-DDs, as received from the project participants, have been made publicly available on the dedicated UNFCCC CDM website prior to the commencement of the validation activity. Stakeholders have been invited to comment on the PoA-DDs within the 30 days public commenting period.

In case comments are received, they are taken into account during the validation process. The comments and the discussion of the same are documented in annex 6 of this report.

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as PoA specific issues as applicable. The validation protocol serves the following purposes:

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

The validation protocol is described in Figure 1.

Validation Protocol Table A-1: Requirement checklist				
Checklist Item	Reference	Validation Team Comment	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.</i>	<i>Gives reference to the information source on which the assessment is based on</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The reporting requirements of the VVS shall be covered in this section.</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft validation stage.</i>	<i>In case a corrective action or a clarification the final assessment at the final validation stage is given.</i>

Figure1: Validation protocol table

The completed validation protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PoA-DDs and supporting background documents related to the programme design and baseline were reviewed.

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

3.7 Site Visit and Follow-up Interviews

The validation team has carried out a site visit in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the PoA with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Project participant representatives Project consultant	<ul style="list-style-type: none"> - Chronological description of the programme activity with documents of key steps of the implementation. - Current status of programme design - Technical details of the programme realization, programme feasibility, designing, operational life

Interviewed Persons / Entities	Interview topics
	<p>time, monitoring of the programme</p> <ul style="list-style-type: none"> - Local policy for adopted project technology - Applicability of applied methodologies - Eligible criteria - Host Government Approval - Approval procedures and status - Monitoring and measurement equipment and system - Additionality and Financial aspects - Procedure for avoiding double counting - Crediting period - Programme activity starting date - CER allocation / ownership - Baseline study assumptions - Additionality - Sustainable development issues - Monitoring of CPAs - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. programme management, monitoring and reporting - National Legislation - Editorial issues of the POA-DD and CPA-DDs

A comprehensive list of all interviewed persons is part of section 7 'References'.

3.8 Project comparison

The validation team has compared the proposed CDM PoA with similar PoA or CDM projects or technologies that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- Programme technology
- Additionality issues
- Reasons for reviews, requests for reviews and rejections within the CDM registration process.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the programme documentation which will have a direct influence the programme results,
- the requirements deemed relevant for validation of the PoA with certain characteristics have not been met or
- there is a risk that the PoA would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

3.9.2 Draft Validation Reporting

After reviewing all relevant documents and taking all other relevant information into account, the validation team issues all findings in the course of a draft validation report and hands this report over to the project proponent in order to respond on the issues raised and to revise the programme documentation accordingly.

3.9.3 Final Validation Reporting

The final validation starts after issuance of the proposed corrective action (CA) of the CARs, CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s)/ FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this PoA falls under. The technical reviewer is



not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published PoA-DD and generic CPA-DD, visits, interviews and supporting documents are summarised:

Table 4-1: Summary of CARs, CLs and FARs issued

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Part A: CDM-PoA-DD			
Description of project activity (PoA-A): - PoA and CPA specification - Technical PoA and CPA description - CPA Eligibility criteria - Project Participants Technologies and/or measures	1	-	-
Application of selected approved baseline and monitoring methodology (PoA-B) - Application of the Methodology to the PoA and a typical CPA - Programme Boundary and locations - Baseline identification - Calculation of GHG emission reductions Project emissions Baseline emissions Leakage - Additionality determination of the PoA - Monitoring Methodology - Monitoring Plan - Project management planning	1	-	-
Duration and Crediting Period of the PoA (PoA-C)	-	1	-
Environmental impacts (PoA-D)	-	-	-
Local Stakeholder Consultation(PoA-E)	-	-	-
Approval, Authorization and other aspects (PoA-F): - Letter of Approval - Contribution to sustainable development - MoC - PoA-DD editorial aspects	-	-	-



Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
Part B: Generic CDM-CPA-DD			
Overall Consistency with finalized PoA-DD			
General description of the CPA (CPA-A) - Responsible entity/individual for the CPA - Identification and description of the CPA - Technical description of the CPA	-	-	-
Eligibility of CPA and Estimation of Emission Reductions (CPA-B) - CPA reference to the PoA - Justification to CPA inclusion eligibility criteria - Demonstration of CPA additionality - Confirmation of CPA boundary - CPA Emission Reduction - CPA Monitoring Plan	-	3	-
Duration and Crediting Period of the CPA (CPA-C)	-	-	-
Environmental impacts (CPA-D)	-	-	-
Local Stakeholder Consultation (CPA-E)	-	-	-
SUM	2	4	0

¹⁾ The letters in brackets refer to the validation protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.

Finding	A1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR



Finding	A1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD version 04, dated on 2012-11-21 part I, section A.6 More accurate information on baseline scenario and the scenario prior to project implementation should be provided in section A.6		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	In the absence of the PoA, animal manure would be left to decay anaerobically in the anaerobic lagoons and methane is emitted to the atmosphere, which is the same as the baseline scenario. The above description was added into Section A.6 of PoA-DD.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s):A.6	New version No.:05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments(#2, #3, etc.) shall be added.</i>	The assessment is based on the PoA-DD version 5 The information on baseline scenario and the scenario prior to project implementation has been provided in section A.6, and could be cross-evidenced by information received during the on-site interview.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD version 04, dated on 2012-11-21 part I, section B.3 The change of applied methodology in POA-DD version 01 and re-published PoA-DD version 04 should be justified.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	In the POA-DD version 01, the combined methodology AMS-III.D and AMS-I.F were applied. However, for each projects under the CPA included in PoA, it is difficult to identify the final energy utilization approach in advance. For simplification and conservative, the proposed PoA will only claim emission reductions from the avoidance of methane emission part, so only AMS-III.D is applied for the PoA-DD version 04. The PoA-DD was updated accordingly.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s):B.3	New version No.:05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:



Finding	B1		
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments(#2, #3, etc.) shall be added.</i>	<p>The assessment is based on the PoA-DD version 5</p> <p>Comparing with PoA-DD version 01, methodology for type I component, i.e. AMS-I.F, has been excluded from the PoA-DD version 4, considering the uncertainty of the further utilizations of recovered biogas and also for conservative and simplification purposes. The correspondingly section, e.g. the project description, the project boundary, the application of methodology, the emission reduction, the monitoring plan and eligible criteria haven been revised in line with applied methodology AMS-III.D version 18. The PoA with the changed methodology has been re-published by DOE on 2012-11-23.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	C1								
Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD						
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR						
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>PoA-DD version 04, dated on 2012-11-21 part I, section C</p> <p>The procedure of avoiding double counting should be provided in more accurate and practical manner in PoA-DD section C by taking CPA unique coordination into account.</p>								
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<p>The unique coordination of the project under the CPA has been considered in the revised procedure of avoiding double counting. Also, the procedure figure was updated accordingly.</p> <p>More information please refer to the Section C(ii) of PoA-DD.</p> <table border="1"> <tr> <td><input checked="" type="checkbox"/> Changes in PDD</td> <td>Section(s):C</td> <td>New version No.:05</td> </tr> <tr> <td><input type="checkbox"/> Changes in XLS</td> <td>Worksheet(s):</td> <td>New version No.:</td> </tr> </table>			<input checked="" type="checkbox"/> Changes in PDD	Section(s):C	New version No.:05	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input checked="" type="checkbox"/> Changes in PDD	Section(s):C	New version No.:05							
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:							
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments(#2, #3, etc.) shall be added.</i>	<p>The assessment is based on the PoA-DD version 5</p> <p>The revised procedure for avoiding of double counting has been checked by DOE, and deemed to be reasonable and practical</p>								
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed								

Finding	B1
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Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD version 04, dated on 2012-11-21 part II, section B.3 Project boundary should be determined in line with applied methodology by taking the utilization of recovered biogas into account		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	As per Methodology AMS-III.D, the boundary of the CPA includes: (a) The livestock; (b) Animal manure management systems (including centralised manure treatment plant where applicable); (c) Facilities which recover and flare/combust or use methane The Section B.3 of PoA-DD was revised accordingly.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s):B	New version No.:05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments(#2, #3, etc.) shall be added.</i>	The assessment is based on the PoA-DD version 5 The revised project boundary is in line with the applied methodology and also consistent with the identified emission sources and GHG		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B2		
Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD version 04, dated on 2012-11-21 part II, section B.5 1. Additionality assessment of CPA should be specified in more accurate manner, if possible by using of step-wise approach. 2. The choice of parameters for sensitivity analysis should be further justified by taking the project scenario into account.		



Finding	B2		
Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	1. Additionality assessment of CPA will be conducted through the flowing three steps: Step1: Checking if the CPA can meet relevant requirement in “Guidelines for demonstrating additionality of microscale project activities”. If the Sep1 can be satisfied, then the CPA is additionality. Otherwise, proceed to Step 2. Step2: Checking if each project included in the CPA can meet relevant requirement for the positive list of technologies and project activity types that are defined as automatically additional in “Guidelines on the demonstration of additionality of small-scale project activities”. If the Sep2 can be satisfied, then the CPA is additionality. Otherwise, proceed to Step 3. Step3: Checking if each project included in the CPA can meet investment barrier in “Guidelines on the demonstration of additionality of small-scale project activities”, which also refer to “Tool for the Demonstration and Assessment of Additionality” and “Guidance on the Assessment of Investment Analysis”. If the Sep3 can be satisfied, then the CPA is additionality. Otherwise, the CPA is not additionality. The Section B.5 of PoA-DD was revised accordingly. 2. According to “Guidance on the Assessment of Investment Analysis”, only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation. Due to the uncertainty of final energy utilization approach for each project, it is difficult to identify the sensitivity factors in advance, so the sensitivity analysis will be conducted in each specific CPA-DD.		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s):B.5	New version No.:05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:



Finding	B2		
Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments(#2, #3, etc.) shall be added.</i>	The assessment is based on the PoA-DD version 5 <ol style="list-style-type: none"> 1. The proposed step-wise additionality assessment scheme has been checked and confirmed by DOE by referring to applied "Guidelines on the demonstration of additionality of small-scale project activities" "Guidelines for demonstrating additionality of microscale project activity" , "Tool for the Demonstration and Assessment of Additionality" and "Guidance on the Assessment of Investment Analysis". 2. The parameters for sensitivity analysis that constitute more than 20% of either total project costs or total project revenues and its variation range +/-10% have been defined for sensitivity analysis. The provision is in line with the guidance on the assessment of investment analysis". 		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding	B3		
Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA-DD version 04, dated on 2012-11-21 part II, section B.7 <ol style="list-style-type: none"> 1. The information of monitoring frequency, QA/QC procedures should be specified for applicable monitored parameters. 2. The responsibilities for data collection, calibration and preparation of monitoring report should be specified in section B.7 3. The inclusion of monitoring of parameters $B_{\text{biomass-j,PJ,y}}$ should be justified. 4. The on-site inspections for each individual farm included in the project boundary and T_i should be also included as monitoring parameter. 		



Finding	B3		
Related DDs	<input type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input type="checkbox"/> real case CPA-DD
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details. In case the PDD is changed as part of the CA, the PP is requested to indicate the revised sections as well as the new version No.</i>	<ol style="list-style-type: none"> The information of monitoring frequency, QA/QC procedures was added into monitored parameters listed in Section B.7. The PoA manage, monitoring team and auditing team are responsible for preparation monitoring report, data collection and calibration respectively. The PoA DD was revised. The parameter $B_{\text{biomass-j,PJ,y}}$ has been excluded from the monitoring plan. The on-site inspections for each individual farm and T_i have been included and defined as monitoring parameter as per methodology 		
	<input checked="" type="checkbox"/> Changes in PDD	Section(s):B.7	New version No.:05
	<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments(#2, #3, etc.) shall be added.</i>	<p>The assessment is based on the PoA-DD version 5</p> <ol style="list-style-type: none"> The information of monitoring frequency, QA/QC procedures for chosen monitored parameters has been revised according to methodology AMS-III.D version 18 in Section B.7. The responsibility for data collection, calibration and preparation of monitoring report has been specified in monitoring plan, and consistent with the defined operation and management structure in PoA section C. The parameter $B_{\text{biomass-j,PJ,y}}$ has been excluded, instead of that, the biogas combusted in year "y" will be monitored by parameter $BG_{\text{burnt,y}}$ The on-site inspections for each individual farm and T_i have been included and defined as monitoring parameter, which is in line with the paragraph 24 of methodology AMS-III.D version 18. 		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

5 VALIDATIONASSESSMENT SUMMARY

5.1 General Description of the PoA

5.1.1 Technology to be employed

The PoA is designed to recover the biogas collected from livestock farms in Gansu province through anaerobic facilities (e.g. the digester) for gainful use purposes.

The residual/sludge from the anaerobic digester will be either recycled to anaerobic treatment system or used for land applications under aerobic condition, and no waste water will be discharged into nature.

A flaring system will be installed in project activity for emergency response, which ensures that all the biogas recovered from digester will be used or flared.

The technology employed is confirmed as environmentally safe and sound, the description of the applied technology of PoA is complete, accurate and in compliance with the PoA-DD and CPA-DD templates and guidelines.

5.1.2 Small Scale PoAs

The emission reductions created from methane recovery for each CPA will be lower than the threshold of 60,000tCO₂e/yr. The annual emission reductions of the first proposed CPA is estimated to 3,023 tCO₂e, which is less than 60kt CO₂e annually, and in line with the threshold defined in applied small scale methodology of AMS-III.D: methane recovery in animal manure management systems (version18)

The DOE has also checked and confirms that the CME has substantiated that the CPA is not a de-bundled component of large scale CDM project through application of applicable EB 54, Annex 13 - "Guidelines on Assessment of Debundling for SSC Project Activities" (version 03).

Therefore the proposed project is a small scale PoA.

5.1.3 Definition of a typical Component Project Activity (CPA)

A complete list of CPA Eligibility Criteria has been set up in section B.2. of the PoA-DD, and is deemed appropriate and sufficient. For detailed assessment, please refer to Annex 7 of this validation report

5.2 PoA Baseline

5.2.1 Application of the Methodology

By consultation of the UNFCCC website, it is confirmed that the Approved methodology for small-scale CDM project:

AMS-III.D. (version 18.0) "Methane recovery in animal manure management systems";

is applicable to the proposed PoA. The versions of applicable CDM Methodology approved by EB are valid during submission for registration.

As per applied methodologies, following methodologies, tools are also used/referred to:

AMS-III.AO.: "Methane recovery through controlled anaerobic digestion" (Version 1.0)

Tool to calculate the emission factor for an electricity system (version 02.2.1);

Tool to determine project emissions from flaring gases containing methane (version 01);

Tool for the Demonstration and Assessment of Additionality (version 06);

The methodologies and tools are available at:

<http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html>

All applicability conditions of the applied methodology have been checked and confirmed. The PoA design is in line with all requirements and stipulations mentioned in all sections of the applied methodologies. Besides, the PoA design is not expected to result in significant emissions related both to project and leakage, other than those listed in the methodology.

5.2.2 PoA Boundary and CPA Boundary

The boundaries (geographically and related to GHG sources/sinks) are correctly given in PoA-DD. The geographical boundary of this PoA is the administrative area of Gansu Province in the People's Republic of China.

As per applied Methodologies AMS-III.D, the boundary of the CPA includes the physical, geographical site(s) of the livestock, animal manure management systems, facilities which recover and flare/combust or use methane.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.

The methodology indicates CO₂ and CH₄ are the GHG sources to be included in the boundary; the DOE confirms that the justification by the PP is reasonable and evidenced. Besides, there are no other sources which are impacted by the project and not addressed by the applied methodologies.

5.2.3 Baseline Identification

The provision to identify the plausible baseline scenario derived from the applied methodology has been applied correctly and is transparently and sufficiently documented in the PoA-DD. The identified baseline is the situation where, in absence of the project activity, animal manure is left to decay anaerobically within the project boundary and the methane is emitted to the atmosphere.

DOE confirms that the identified baseline scenario is plausible, conservative and reasonably represents what would occur in the absence of the proposed PoA, and the approved methodology used is applicable to the identified baseline scenario. For a detailed assessment of the baseline, please refer to Annex 3

5.2.4 Algorithms and formulae used to determine emission reductions

The PoA-DD applies step-wise approach to calculate the project emissions, the baseline emissions and the leakage to produce the emission reductions, as per the requirements of the applied methodology AMS-III.D.

Considering the uncertainty of the further utilizations of recovered biogas and also for conservativeness and simplification purposes, the emissions from the type I component have been ignored in proposed PoA.

It could also be confirmed by DOE that the conservative assumptions have been adopted in the calculation of the GHG emission reductions and reflect the methodological choices.

The emission reduction is calculated as the differences among the baseline emission (BE_y), the project emission (PE_y) and the leakage (L_y).

$$ER_y = BE_y - PE_y - L_y$$

Baseline emissions:

The baseline emission reductions have been ex-ante calculated as per defined project scenarios by using of following equation:

$$BE_{CH_4,y} = GWP_{CH_4} * D_{CH_4} * UF_b * \sum_{j,LT} MCF_j * B_{0,LT} * N_{LT,y} * VS_{LT,y} * MS \%_{Bl,j}$$

Where

$BE_{CH_4,y}$	Baseline emissions due to methane recovery in year y (tCO ₂ e/year)
GWP_{CH_4}	Global Warming Potential (GWP) of CH ₄ (21 tCO ₂ e/tCH ₄)
D_{CH_4}	CH ₄ density (0.00067 t/m ³ at 20 °C and 1 atm pressure)
LT	Index for all types of livestock
j	Index for animal manure management system
MCF_j	Annual methane conversion factor (MCF) for the baseline animal manure management system j

$B_{0,LT}$	Maximum methane producing potential of the volatile solid generated for animal type LT ($m^3 CH_4/kg$ dm)
$N_{LT,y}$	Annual average number of animals of type LT in year y
$VS_{LT,y}$	Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year)
$MS \%_{BL,j}$	Fraction of manure handled in baseline animal manure management system j
UF_b	Model correction factor to account for model uncertainties (0.94)

Determination of $B_{0,LT}$:

According to AMS-III.D, the maximum methane-producing capacity of the manure (B_0) varies by species and diet. Since country-specific values are unavailable, default values from Table 10A-4 to 10A-8, 2006 IPCC for National Greenhouse Gas Inventories volume 4 Chapter 10 is applied.

Determination of $VS_{LT,y}$:

As stated in AMS-III.D, *Volatile solids (VS) are the organic material in livestock manure and consist of both biodegradable and non-biodegradable fractions. For the calculations the total VS excreted by each animal species is required. The preferred method to obtain VS is to use data from nationally published sources. These values shall be compared with IPCC default values and any significant differences shall be explained. If data from nationally published sources are not available, country-specific VS excretion rates can be estimated from feed intake levels, via the enhanced characterization method (tier 2) described in section 10.2 in 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 chapter 10. If country specific VS values are not available IPCC default values from 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 chapter 10 table 10 A-4 to 10 A-9 can be used provided that the project participants assess the suitability of those data to the specific situation of the treatment site particularly with reference to feed intake levels.* The default IPCC values for VS are adjusted for a site-specific average animal weight as follows:

$$VS_{LT,y} = \left(\frac{W_{site}}{W_{default}} \right) * VS_{default} * nd_y$$

Where:

W_{site}	Average animal weight of a defined livestock population at the project site (kg)
$W_{default}$	Default average animal weight of a defined population, this data is sourced from IPCC 2006 (kg)
$VS_{default}$	Default value for the volatile solid excretion rate per day on a dry-matter basis for a defined livestock population (kg dm/animal/day)
nd_y	Number of days in year y where the animal manure management system is

operational

Determination of MCF_j:

As stated in AMS-III.D, *methane conversion factor is determined for a specific manure management system and represents the degree to which B₀ is achieved. Where available country-specific MCF values that reflect the specific management systems used in particular countries or regions shall be used. Alternatively, the IPCC default values provided in table 10.17 of 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Chapter 10 can be used.*

Please refer to the part of the table 10.17 in IPCC 2006.

The Table 10A-4 to 10A-9 presents a combination of MCF, B₀ and VS.

MCF: the site annual average temperature taken from official data at the nearest meteorological station or historical on site observations and the manure decay system should be considered for MCF selection from IPCC.

B₀, VS: determined based on the livestock species and original of the livestock.

Determination of N_{LT,y}

According to AMS-III.D, the annual average number of animals (N_{LT,y}) are determined as follows:

$$N_{LT,y} = N_{da,y} * \left(\frac{N_{p,y}}{365} \right)$$

Where:

$N_{da,y}$ Number of days animal is alive in the farm in the year y (numbers)

$N_{p,y}$ Number of animals produced annually of type LT for the year y (numbers)

Project emissions:

As per applied methodology AMS-III.D, the project emissions were considered and calculated as followings

$$PE_y = PE_{PL,y} + PE_{flare,y} + PE_{power,y} + PE_{transp,y} + PE_{storage,y}$$

Where:

$PE_{PL,y}$ Emissions due to physical leakage of biogas in year y (tCO₂e)

$PE_{flare,y}$ Emissions from flaring or combustion of the biogas stream in the year y (tCO₂e)

$PE_{power,y}$ Emissions from the use of fossil fuel or electricity for the operation of the installed facilities in the year y (tCO₂e)

$PE_{transp,y}$ Emissions from incremental transportation in the year y (tCO₂e), as per relevant paragraph in AMS-III.AO

$PE_{storage,y}$ Emissions from the storage of manure (tCO₂e)

➤ **PE_{PL,y}**

According to paragraph 13 of AMS-III.D ver. 18, two methods are available for calculation, option (i) under method (a) was chosen and the calculation formular is as follow:

$$PE_{PL,y} = 0.10 * GWP_{CH_4} * D_{CH_4} * \sum_{i,LT} B_{o,LT} * N_{LT,y} * VS_{LT,y} * MS\%_{i,PJ,y}$$

Where:

GWP_{CH_4}	Global Warming Potential (GWP) of CH ₄ (21)
D_{CH_4}	CH ₄ density (0.00067 t/m ³ at room temperature 20 °C and 1 atm pressure)
LT	Index for all types of livestock
j	Index for animal manure management system
$B_{o,LT}$	Maximum methane producing potential of the volatile solid generated for animal type LT (m ³ CH ₄ /kg dm). Please refer to the justification in BE _{CH₄,y} calculation.
$N_{LT,y}$	Annual average number of animals of type LT in year y (numbers). Please refer to the justification in BE _{CH₄,y} calculation.
$VS_{LT,y}$	Volatile solids for livestock LT entering the animal manure management system in year y (on a dry matter weight basis, kg dm/animal/year). Please refer to the justification in BE _{CH₄,y} calculation.
$MS\%_{i,PJ,y}$	Fraction of manure handled in system i in year y . All the livestock manure will be treated in the system. It will be monitored during the implementation of the CPA within PoA.

➤ **PE_{flare,y}**

In case of flaring/combustion of biogas, the project emission is calculated according to *Tool to determine project emissions from flaring gases containing methane* ver. 01.

$$PE_{flare,y} = \sum_{h=1}^{8760} TM_{RG,h} \times (1 - \eta_{flare,h}) \times \frac{GWP_{CH_4}}{1000}$$

Where:

$TM_{RG,h}$	Mass flow rate of methane in the residual gas in the hour h (kg/h)
$\eta_{flare,h}$	Flare efficiency in hour h ; 0 is used for this parameter. This is conservative.

$$TM_{RG,h} = FV_{RG,h} \times fv_{CH4,RG,h} \times \rho_{CH4,n}$$

Where:

$TM_{RG,h}$	Mass flow rate of methane in the residual gas in the hour h (kg/h)
$FV_{RG,h}$	Volumetric flow rate of the residual gas in dry basis at normal conditions in hour h; (m ³ /h)
$fv_{CH4,RG,h}$	Volumetric fraction of methane in the residual gas on dry basis in hour h
$\rho_{CH4,n}$	Density of methane at normal conditions (0.716); (kg/m ³)

➤ **PE_{power,y}**

As non involvement of fossil fuel is seted as one EC, according to AMS-III.D, projet emission from electricity consumption is determine as per the procedures described in AMS-I.D as follow:

$$PE_{power,y} = EC_{ele,PJ,y} \times EF_{grid,CM,y}$$

Where:

$EC_{ele,PJ,y}$	Quantity of net electricity consumed by the Project in year y (MWh/yr)
$EF_{grid,CM,y}$	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of the “ <i>Tool to calculate the emission factor for an electricity system</i> ” ver. 02.2.1.

Determination of EF_{grid,CM,y}:

According to ‘Tool to calculated the emission factor for an electricity system’ Ver.02.2.1. The grid emission factor was determined ex-ante and estimated as a combined margin emission factor (EF_{grid,CM,y}) taking into account the operating margin emission factor (EF_{grid,OM,y}) and built margin emission factor (EF_{grid,BM,y}).

The calculation methods are derived from the guidance issued by the Chinese DNA on 2006-12-15 and the Tool to calculate the emission factor for an electricity system. The National Development and Reform Commission of People’s Republic of China calculates EF_{grid,OM,y} and EF_{grid,BM,y} for each sub-grid and renews the results every year. The latest data prior to PDD-GSP published on 2012-10-17 were used ^{/dna/}.

EF_{grid,OM,y} calculation: Due to the fact that the low-cost must-run resources constitute less than 50% to the total grid generation and that data for “Dispatch Data Analysis” is not available, the simple OM emission factor (EF_{grid,OM,y}) calculation method is chosen. The OM factor is calculated as generation-weighted average emissions per electricity unit of all generating sources serving the system (not including the low-cost and must-run power plants) of three years average data (2008-2010). The EF_{grid,OM,y} is calculated to be 0.9914tCO_{2e}/MWh.

EF_{grid,BM,y} calculation: Due to the data unavailability at the power plant level in China

and in accordance to the “clarification on use of approved methodology AM0005 for several projects in China” from EB, the build margin is calculated as following²:

1. Calculating the share of CO₂ emissions of different fuel-fired power plants in the total CO₂ emissions, including coal, oil and gas.
2. The BM is calculated as: 0.5398tCO_{2e}/MWh.

In accordance with the “*Tool to calculate the emission factor for an electricity system*” (Ver. 02.2.1) weight factors of $w_{OM} = w_{BM} = 0.5$ were used to calculate EF_{grid,CM,y}.

$$\begin{aligned} EF_{grid,CM,y} &= 0.5 \times EF_{grid,OM,y} + 0.5 \times EF_{grid,BM,y} \\ &= 0.5 \times 0.9914 \text{ tCO}_2\text{e/MWh} + 0.5 \times 0.5398 \text{ tCO}_2\text{e/MWh} \\ &= 0.7656 \text{ tCO}_2\text{e/MWh} \end{aligned}$$

The grid emission factor will be fixed in the first crediting period.

The validation team is convinced of the result of the emission coefficient calculation. It is deemed to be adequate and transparent. All data required for emission the coefficient calculation were derived from publicly available data of the Chinese government^{/GEF/}.

➤ PE_{transp,y}

According to the relevant procedure in AMS-III.AO ver. 01, the emission from incremental transporation is calculate as follow:

$$PE_{transp,y} = (Q_y / CT_y) * DAF_w * EF_{CO2} + (Q_{y,treatment} / CT_{y,treatment}) * DAF_{treatment} * EF_{CO2}$$

Where:

Q_y	Quantity of manure treated in the year y (tonnes)
CT_y	Average truck capacity for transportation (tonnes/truck)
DAF_w	Average incremental distance for manure transportation (km/truck)
EF_{CO2}	CO ₂ emission factor from fuel use due to transportation (kgCO ₂ /km, IPCC default values or local values may be used)
$Q_{y,treatment}$	Quantity of product produced in year y (tonnes)
$CT_{y,treatment}$	Average truck capacity for product transportation (tonnes/truck)
$DAF_{treatment}$	Average distance for product transportation (km/truck)

➤ PE_{storage,y}

According to paragraph 16 of AMS-III.D, *project emissions on account of storage of*

²<http://cdm.unfccc.int/Projects/deviations/87512>

manure before being fed into the anaerobic digester shall be accounted for if both condition (a) and (b) below are satisfied:

(a) The storage time of the manure after removal from the animal barns, including transportation, exceeds 24 hours before being fed into the anaerobic digester; and

(b) The dry matter content of the manure when removed from the animal barns is less than 20%.

The following method can be used to calculate project emissions from manure storage:

$$PE_{storage,y} = GWP_{CH_4} * D_{CH_4} * \sum_{LT,l} \left[\frac{365}{AI_l} \sum_{d=1}^{AI_l} (N_{LT,y} * VS_{LT,d} * MS\%_l * (1 - e^{-k(AI_l-d)}) * MCF_l * B_{0_{LT}}) \right]$$

Where:

$PE_{storage,y}$	Project emissions on account of manure storage in year y (tCO ₂ e)
AI_l	Annual average interval between manure collection and delivery for treatment at a given storage device l (days)
$VS_{LT,d}$	Amount of volatile solid production by type of animal LT in a day (kg VS/head/d)
$MS\%_l$	Fraction of volatile solids (%) handled by storage device l
k	Degradation rate constant (0.069)
d	Days for which cumulative methane emissions are calculated; d can vary from 1 to 45 and to be run from 1 up to AI_l
MCF_l	Annual methane conversion factor for the project manure storage device i from Table 10.17, Chapter 10, Volume 4. please refer to the justification in BE _{CH4} .

Leakage:

The leakage was neglected as per AMS-III.D

According to AMS-III.D ver. 18.0, *the emission reductions achieved by avoiding methane emission will be determined ex post through direct measurement of the amount of methane fuelled, flared or gainfully used. It is likely that the project activity involved manure treatment steps with baseline situation, before the emission reductions achieved by the project activity is limited to the ex post calculated baseline emissions minus project emissions using the actual monitored data for the project activity.* Thus the emission reduction for ex post calculation is as follow:

$$ER_{y,ex-post} = \min[(BE_{y,ex-post} - PE_{y,ex-post}), (MD_y - PE_{power,y,expost})]$$



$ER_{y,ex\ post}$	Emission reductions achieved from the methane recovery based on the monitored values (tCO_2e)
$BE_{y,ex\ post}$	Baseline emissions calculated as per AMS-III.D using ex post monitored value of $N_{LT,y}$
$PE_{y,ex\ post}$	project emissions calculated as per AMS-III.D using ex post monitored value.
MD_y	Methane captured and used gainfully by the project activity in year y (tCO_2e)
$PE_{power,y,ex\ post}$	Emissions from the use of fossil fuel or electricity for the operation of the installed facilities based on the monitored values in year y (tCO_2e)

$$MD_y = BG_{burnt,y} * w_{CH4,y} * D_{CH4} * FE * GWP_{CH4}$$

$BG_{burnt,y}$	The amount of biogas utilized in year y, m^3
w_{CH4}	Methane content in biogas in year y (volume fraction)
$PE_{y,ex\ post}$	project emissions calculated as per AMS-III.D using ex post monitored value.
FE	Flare efficiency in year y (fraction)
D_{CH4}	The methane density at the monitored temperature and pressure

According to AMS-III.D, the D_{CH4} at $20^\circ C$ and 1 atm pressure is $0.00067t/m^3$. The gas flow condition including the temperature and pressure can be monitored under single CPA.

It is confirmed by the DOE by cross-checking the emission reduction calculation spread sheet for a specific CPA^{/XLS/} against all referenced data sources and the requirements of applied methodology and methodological tools that:

- All data sources and assumptions used by the CPA under PoA are listed and referenced in the PoA-DD and in line with the methodology. Calculations are correct, applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions;
- All documentation used by project participants as the basis for assumptions and source of data such as China Electric Power Yearbook and 2006 IPCC Guidelines for National Greenhouse Gas Inventories is correctly quoted and interpreted in the PoA-DD;
- All values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

- e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.

5.3 Additionality Determination

5.3.1 PoA

By taking the “Guideline for demonstrating additionality of micro-scale project activities” and “Guidelines on the demonstration of additionality of small-scale project activities”, into account, a step-wise approach was adopted for additionality assessment.

Step 1: assess the CPA against the “Guideline for demonstrating additionality of micro-scale project activities” only when the CPA fulfils all the criteria listed below, then the CPA is additional, otherwise, the CPA should further assessed against the defined criteria in next step.

- 1) The emission reductions from type III components of CPA are no more than 20ktCO_{2e} per year.
- 2) 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;

Step 2: assess the project under CPA according to the automatically additional criteria defined in the “Guidelines for demonstrating additionality of small-scale project activities.” Only when the project under CPA fulfils all the criteria listed below, then the CPA is additional, otherwise, the CPA should further assessed against the defined criteria in next step

- 1) Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs)
- 2) The emission reductions from type III components of each project activity under CPA are no more than 3,000tCO_{2e} per year.

Step 3: assess the project under CPA according to the “Guidelines for demonstrating additionality of small-scale project activities.” and “tool for the demonstration and assessment of additionality”.

The investment analysis should be adopted for project under CPA to demonstrate the additionality as per following sub-steps

3.1 Determine appropriate analysis method

Due to the facts that, all the projects under the CPA will earn revenues not only from the CERs sales but also from energy use, the simple cost analysis method is therefore not appropriate.



The investment comparison analysis method is only applicable to projects whose alternatives are similar investment projects. However, for all the projects under CPA, have different output service than the baseline scenario; therefore, the investment comparison analysis is also not applicable.

Therefore, for each project under the CPA will use benchmark analysis method (Option III) and demonstrate that it is not likely to be the most financially attractive option.

3.2 Determine the benchmark

The benchmark for project under CPA has been determined in line with the national financial assessment standards. The project IRR (before tax) of 7% as per the Economic Evaluation Method and Parameter of Construction Projects (3rd edition) for the stock farming was adopted.

3.3 Calculation and comparison of financial indicators

3.4 Sensitivity analysis

The additionality will only be justified, when the IRR of the project included in the CPA is lower than the chosen benchmark.

The DOE confirms that the additionality was demonstrated in accordance with the requirements defined in applied methodology, the PoA Procedures, and the guidelines for demonstrating additionality of small-scale project activities.

CDM was seriously considered by the CME before the starting of the project activity, only the CPAs which are started after the publishing of POA will be included, and all the arguments and assumption in the PoA-DD are well evidenced.

5.3.2 CPA level

Starting date / Consideration of CDM in decision making

The starting date of CPA is defined as the earliest date at which either the implementation or construction or real action of a CPA begins. And as per defined eligible criteria, only the CPAs, which are started after the commencement of the validation of the PoA (date of publication for GSCP) will be included in PoA.

The DOE confirms that the starting date of CPA is determined in line with the definition of Glossary of CDM terms (ver. 07.0), and CDM has been seriously considered due to the fact that only the CPA started after the commencement of the validation of the PoA could be qualified and included.

5.4 Operational, Management and Monitoring Plan of the PoA

Management structure of the monitoring plan is defined in Section C and is assessed to be appropriate for the purpose of the projects monitoring. The overall responsibility for the monitoring will be held by CME, the Lanzhou Hualong Poultry Breeding Co.

As per proposed management structure, a PoA manager is appointed by CME and is in fully charge of monitoring and all the issues related to PoA, the detailed responsibilities include the development of PCDM; the communication with EB, DNA and related agencies; establish and implementing the monitoring plan and training plan; data collection.

In-charge personnel will also be appointed at CPA level, who is taking care of parameter monitoring and data plausibility check. Under the in-charge person, monitoring team and audit team will be designated and take the responsibilities of monitoring and QA/QC correspondingly.

The monitoring plan

The DOE applied a two-step process to assess the compliance with the requirements of monitoring plan, as follows:

Step1: Compliance check of the monitoring plan against the approved methodology:

Identify the list of parameters which are required by the applied methodology by means of document review. The monitoring parameters involved in PoA are as follows:

- W_{site} –average animal weight of a defined livestock population at the CPA site
- nd_y –number of days in year y where the treatment plant was operational,
- $N_{da,y}$ –number of days animal is alive in the farm in year y .
- $N_{p,y}$ –number of animals produced annually of type LT in year y .
- $MS\%_{i,y}$ – Fraction of manure handled in system i in year y
- $BG_{burnt,y}$ - the amount of biogas combusted in year y
- Q_y –quantity of manure treated
- $Q_{y,treatment}$ –quantity of product produced in year
- CT_y –average truck capacity for manure transportation
- $CT_{y,treatment}$ –average truck capacity for product transportation
- DAF_w –average incremental distance for manure transportation
- $DAF_{treatment}$ –average incremental distance for product transportation
- T_{PJ} –temperature of the biogas at the flow measurement site
- P_{PJ} –pressure of biogas at the flow measurement site
- $EC_{ele,PJ,y}$ –quantity of net electricity consumed by a typical SSC-CPA in year y
- $FV_{RG,h}$ –volumetric flow rate of the biogas discharge to flare in hour h
- $MS\%_l$ –fraction of volatile solids (%) handled by storage device l .
- T_i –annual average ambient temperature at meteorological station nearby the project site
- AI_l –annual average interval between manure collection and delivery for

treatment at a given storage device I.

- On site inspections for each individual farm included in the project boundary
- Soil application

It is confirmed that the monitoring plan contains all necessary parameters, the means of monitoring described in the monitoring plan complies with the requirements of the applied methodology;

Step 2: the implementation of the monitoring plan

The monitoring arrangements described in the monitoring plan are feasible within the project design;

The information, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the CPA within PoA can be reported ex post and verified.

The assessment has been conducted by the DOE by means of reviewing of the documented procedures, interviewing with relevant personnel, project plans and physical inspections of the specific CPA site.

100% CPAs will be monitored in PoA, which ensures a clear verification status of all CPAs.

5.5 Crediting Period

As per the PoA requesting registration uploading procedures, the start date of the PoA is defined as the starting date of the PoA crediting period. The start date of crediting period has been unambiguously stated in the PoA-DD, i.e. 2013-02-01 or on the date of registration, whichever is later. The PoA duration is stated in the PoA-DD section D as 28 years, which is deemed appropriate.

5.6 Environmental Impacts

Environmental Analysis is chosen to be done at CPA level.

The EIA will be carried out in accordance with the requirements in host country, all the environmental aspects for instance like, the resource, wastewater, air pollution, noise and solid waste during the project preparation, construction and operation period have been clearly described in PoA-DD and the real case CPA-DD. Neither significant environmental impacts nor transboundary impacts have been observed.

5.7 Comments by Local Stakeholders

The PP followed the invitation procedure for stakeholder comments on the PoA level in line with relevant requirements. The choice of the PoA level was sufficiently justified in the PoA-DD.

The Gansu Province Rural Energy Office as well as its affiliated local rural energy offices located in all counties throughout Gansu province, as the co-operator of CME, can make sure that the stakeholder consultation process covers the whole Gansu province.

On 2011-03-01, the bulletin of the stakeholder opinion survey for the PoA was published by CME on the website of Gansu Province Rural Energy Office. The bulletin contains the brief introduction of the PoA and invites the relevant stakeholders in Gansu province to comment on the PoA through the phone of Gansu Province Rural Energy Office or through the visit on the local county rural energy offices and taking the questionnaires. No negative comment was received, which was verified by the validation team via interviewing with the representatives from Gansu Province Rural Energy Office ^{/IM02/} and CME of Lanzhou Hualong Poultry Breeding Co.

On 2011-03-02, Gansu Province Rural Energy Office issued the notification on the implementation of stakeholder consultation for the PoA (numbered as: Gan Nong Neng Han[2011] No.11) to all the local county rural energy offices in Gansu province. This notification ^{/SHCP/} requires the local county rural energy offices should publish the bulletin of the stakeholder opinion survey for the PoA in respective county and distribute and collect the questionnaires.

On 2011-03-30, the consultant, A&T Carbon Asset Co., Limited, has provided the training of stakeholder survey method to the relevant employees from CME of Lanzhou Hualong Poultry Breeding Co., Gansu Province Rural Energy Office and all local county rural energy offices in Gansu province ^{/SHCL/}.

During the period of March 2011 and April 2011, the Local Rural Energy Offices and the CME went to countryside to distribute questionnaires; meanwhile, some householders got the questionnaires by themselves directly from Local Rural Energy Offices. Totally 90 copies of questionnaires in different counties were returned, which was verified by the validation team via interviewing with the representatives from Gansu Province Rural Energy Office, local rural energy offices and CME of Lanzhou Hualong Poultry Breeding Co. and through checking the questionnaires and onsite consultation photos. The questionnaires show that 100% of the investigated people are supportive to the project construction and no negative comments have been received.

Based on the on-site validation investigation, all relevant local stakeholders have been invited to comment on the PoA, and a summary of comments is available in section F of the PoA-DD Version 04 dated 2012-11-21. And given the positive comments received, no significant comment was necessary to be taken into account.

Along with above mentioned documents and also based the information received during the on-site interview conducted by DOE, it could be concluded that the local stakeholders have been properly invited to comment on the PoA and the first CPA, and a summary of comments is available in section F of the PoA-DD and real case CPA-DD. And given the positive comments received, no significant comment was necessary to be taken into account.

5.8 Participation

5.8.1 Definition of Roles

The PoA CME (Coordinating and Managing Entity) is Lanzhou Hualong Poultry Breeding Co., which is authorized as host country project participant. A&T Carbon Asset Co., Limited has been determined as the project participant from Annex 1 country, which has been authorized by the DNA of United Kingdom.

Information regarding with project participants and contributions to sustainability development is confirmed and consistent with each other in the PoA-DD and LOAs.

5.8.2 LOA

The precise title of this PoA is: *“Animal Manure Treatment Programme in Gansu Province”*.

Host country Approval for this PoA has been issued on 2012-02-22 vide official document (No. 3688) by the National Development and Reform Commission of the People’s Republic of China, which is confirmed as China’s DNA. As indicated in this approval, the PoA complies with the permission requirements and assists the host country in achieving sustainable development.

Annex-I country Approval for this PoA has been issued on 2012-04-02 vide official document by Environment Agency, which is confirmed as United Kingdom’s DNA.

The DOE confirms that, the project information, e.g. project name, the project participants is consistently described in PoA-DD, CPA-DD and LoAs.

5.8.3 MoC

The MOC has provided in form of a scanned version by A&T Carbon Asset Co., Limited who has the contractual relationship with TÜV NORD. It could be confirmed by DOE that:

The latest version of the form “Modalities and Communication statement” (F-CDM-MOC) has been used, and the information required as per the F-CDM-MOC, including its annex 1, is correctly completed.

The CME, Lanzhou Hualong Poultry Breeding Co. and PP from Annex I country are nominated as joint focal signing M-MOC correspond to the PP’s authorized signatories included in F-CDM-MOC, annex 1.

TÜV NORD confirmed that the MoC statement complies with all relevant forms and in line with the requirements stipulated in paragraph 72 of Clean Development Mechanism Project Standard (ver. 02.0 Annex2 EB70) and paragraph 59 to 61 of VVS ver. 03.0 Annex 3 EB 70.

5.9 Project Documentation Editorial Aspects

F-CDM-SSC-PoA-DD template version 02 is adopted by PoA DD and is in compliance with the latest PoA-DD and CPA-DD guidelines.

6 VALIDATION OPINION

A&T Carbon Asset Co., Limited has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the programme of activities (PoA): "Animal Manure Treatment Programme in Gansu Province" with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board.

In the course of the validation 2 Corrective Action Requests (CARs) and 4 Clarification Requests (CLs) for PoA-DD were raised and all have been successfully closed. No FAR has been raised.

The review of the PoA-DD, and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The PoA is in line with all relevant host country criteria (China) and all relevant UNFCCC requirements for CDM. Project activity approvals have been obtained from host country DNA of China, the National Development and Reform Commission of the people's republic of China, vide the Letter of Approval (HCA) dated 2012-02-22. Letter of approval from Annex I country United Kingdom has been issued on 2012-04-02 vide official document by Environment Agency, which is confirmed as the DNA of United Kingdom.
- The baseline has been appropriately identified as per the applied methodologies.
- The PoA additionality is sufficiently justified in the PoA-DD.
- The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient.
- The monitoring plan is transparent and adequate.
- The calculation of the emission factors and the CPA emission reductions is carried out in a transparent and conservative manner.
- Information on the local stakeholders' consultation by the project participants prior to submitting the PoA for validation is sufficiently provided in the PoA-DD.
- All information has been also consistently applied in the generic CPA-DD form.
- The conclusions of this report show, that the PoA, as it was described in the project documentations, is in line with all criteria applicable for the validation.

Shanghai, 2012-12-23



LI Yongjun

Essen, 2012-12-23



Martin Saalman



TÜV NORD JI/CDM CP
Validation Team Leader

TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/CDA/	Gansu Province Rural Energy Office and Lanzhou Hualong Poultry Breeding Co.: The cooperation development agreement for <i>Animal Manure Treatment Programm</i> , signed on 2011-10-25.
/CIM/	A&T Carbon Asset Co., Limited: CPA Inclusion Manual, version 01 dated 2012-04
/CONF/	Lanzhou Hualong Poultry Breeding Co.: Board decision regarding the voluntary coordinated action for the proposed PoA, dated 2011-07-20.
/CPA-DD-R/	1st CPA titled: Animal Manure Treatment Programme in Gansu Province--CPA-0001, version 04 dated 2012-11-21 (webhosted) and version 05 dated 2012-12-23 (final).
/EIA/	Environmental Impact Assessment,dated on 2010-07-20 (for 1 st real case)
/EIAA/	Pingchuan District Environmental Bureau: Approval of Environmental Impact Analysis Report dated 2010-07-22 (for 1 st real case)
/FSR/	Feasibility Study Report,dated2010-07, completed by Shaanxi Province Agricultural Engineering Survey and Design institute and Northwest Working Station of Biogas Product Testing Center of Agriculture Ministry(for 1st real case)
/FSRA/	Approval of Project Feasibility Study, dated 2011/04/28 issued by Gansu Development and Reform Commission(for 1 st real case)
/HCA/	National Development and Reform Commission (DNA of P.R. China): Letter of approval (No.3688), issued February 2012.
/IA/	Investment analysis for 1 st real case CPA
/LIC/	Lanzhou City Administration for Industry and Commerce: <i>Business license of Lanzhou Hualong Poultry Breeding Co. (No.620104100004514(1-1))</i> , issued on 2009-10-20.
/LOA/	Environment Agency (DNA of the United Kingdom: Letter of Approval, issued on 2012-04-02.
/MOC/	Modalities of Communication for the proposed PoA



Reference	Document
/PoA-DD/	A&T Carbon Asset Co., Limited: F-CDM-SSC-PoA-DD of Animal Manure Treatment Programme in Gansu Province, version 04 dated 2012-11-21 (webhosted) and version 05 dated 2012-12-23 (final)
/SHCP/	Stakeholder consultation process evidence: <ul style="list-style-type: none"> ➤ Lanzhou Hualong Poultry Breeding Co.: bulletin on the stakeholder opinion survey for the PoA , published at the website of Gansu Province Rural Energy Office on 2011-03-01. ➤ Gansu Province Rural Energy Office <i>The notification on the implementation of stakeholder consultation for the PoA of Animal Manure Treatment Programme in Gansu Province (Gan Nong Neng Han[2011] No.11)</i>, issued on 2011-03-02. ➤ Lanzhou Hualong Poultry Breeding Co.: 90 copies of Stakeholder consultation questionnaires for the PoA, dated 2011-04. ➤ Photos of stakeholders' questionnaire survey by CME dated 2011/03 for the proposed PoA. ➤ Lanzhou Hualong Poultry Breeding Co. and A&T Carbon Asset Co., Limited: Training Manual including the stakeholder survey method, dated 2011-03-30.
/XLS/	Emission reduction calculation spreadsheet

Table 7-2: Background investigation and assessment documents

Reference	Document
/AMS.III.AO/	AMS-III.AO.: "Methane recovery through controlled anaerobic digestion" (Version 1.0)
/AMS.III.D/	AMS-III.D.: "Methane recovery in animal manure management systems" (version 18.0);
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/G-IA/	Guidance on the Assessment of Investment Analysis (Ver 05)
/G-M/	General Guidelines for SSC CDM methodologies (Ver 19)
/G-MIC/	Guidelines for demonstrating additionality of microscale project activities (Ver 04)

Reference	Document
/IPCC-GP/	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
/IPPC-RM/	Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
/KPI/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/PoA-DDs-T/	<p>F-CDM-SSC-PoA-DD—programme design document form for small-scale CDM Programme of Activities (version 02).</p> <p>Guidelines for F-CDM-SSC-PoA-DD- Guidelines for completing the programme design document form for small-scale CDM programmes of activities (version 02, EB 67 Annex 30).</p> <p>F-CDM-SSC-CPA-DD—Component project design document form for Small-Scale component project activities (version 02).</p> <p>Guidelines for CDM-SSC-CPA-DD- Guidelines for completing the component project design document form for small-scale component project activities (version 01.0, EB66 Annex 17).</p>
/PoAR/	<p>CDM Programme of Activities Requirements::</p> <ol style="list-style-type: none"> 1. Clean Development Mechanism validation and verification Standard (version 03; EB70 Annex 3) 2. Clean Development Mechanism Project Standard (version 02; EB70 Annex 2) 3. “Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities” (version 04.1, EB 55 Annex 38) (the “PoA Procedures”); 4. “Clarifications regarding the procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities” (version 01, EB 60 Annex 26) 5. “Procedures for review of erroneous inclusion of a CPA” (version 03, EB 61 Annex 22) (the “CPA Review Procedures”) 6. Guidelines on assessment of debundling for SSC project activities (version 03, EB54 Annex 13) 7. “Procedures for approval of the application of multiple methodologies to a programme of activities” (version 01; EB 47 Annex 31) (the “Multi-Meth Approval Procedures”);



Reference	Document
	<p>8. Guidelines for demonstrating additionality of microscale project activities (version 04, EB 68 Annex 26)</p> <p>9. Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 02.0, EB 70 Annex 5)</p> <p>10. Implementation plan for standards for programme of activities (version 01.0, EB 64 Annex 2)</p> <p>11. Standard for sampling and surveys for CDM project activities and programme of activities (version 03.0, EB 69 Annex 4)</p>
/S-MM/	Standard for Application of Multiple CDM Methodologies for a Programme of Activities (Ver 01.0);
/SSC-A/	Guidelines for demonstrating additionality of small-scale project activities (Ver.09.0)
/T-ADD/	Tool for the Demonstration and Assessment of Additionality (Ver 06.0.0);
/T-EF/	Tool to calculate the emission factor for an electricity system (Ver 02.2.1);
/T-PEF/	Tool to determine project emissions from flaring gases containing methane (Ver 01)

Table 7-3: Websites used

Reference	Link	Organisation
/dna/	1. http://cdm.ccchina.gov.cn/website/CDM/pdf/Item_new/Item_new7936.pdf 2. http://www.environment-agency.gov.uk/business/topics/pollution/129666.aspx	1. National Development and Reform Commission (DNA of P.R. China): LoA issuance of the proposed PoA. 2. Environment Agency (DNA of United Kingdom of Great Britain and Northern Ireland)
/cd4cdm/	www.cd4cdm.org	UNEP Riso Centre
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹	Date		Name	Organisation / Function
/IM01/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Yang Fa Zhong	Lanzhou Hualong Poultry Breeding Co./ project manager / Office manager
/IM01/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Gu Dong	Lanzhou Hualong Poultry Breeding Co./ Project manager
/IM01/	V	2011-11-14 to 2011-11-18	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Huang Jing	A&T Carbon Asset Co., Limited / Project manager
/IM01/	V	2011-11-14 to 2011-11-18	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Zhang Jing	A&T Carbon Asset Co., Limited / Project manager
/IM02/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Sai Yong	Gansu Province Development and Reform Commission / officer
/IM02/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Zhai Xiao Peng	
/IM02/	V	2011-11-14 to 2011-11-18	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Jiang Yong Bo	Gansu Province Environmental Protection Bureau / officer
/IM02/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Luo Ji Xue	Gansu Province Rural Energy Office / Office manager
/IM02/	V	2011-11-14 to	<input checked="" type="checkbox"/> Mr.	Li Yin Zhong	Gansu Province Rural Energy Office /



Reference	Mol ¹	Date		Name	Organisation / Function
		2011-11-18	<input type="checkbox"/> Ms		Vice office manager
/IM02/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Li Cun Shi	PingLiang City Rural Energy Office of Gansu Province / Office manager
/IM02/	V	2011-11-14 to 2011-11-18	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	WEI Huiming	Baiyin Huang River Feed Co. Ltd. / General manager

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Applicability Criteria
- A3:** Assessment of Baseline Identification
- A4:** Assessment of Financial Parameters
- A5:** Assessment of Barrier analysis
- A6:** Outcome of the GSCP
- A7:** Eligibility Criteria Assessment
- A8:** Statement of competence of involved Personnel

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Programme Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
A. General Description of the Programme of Activities				
A.1. Technology to be employed <i>Validation of programme technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.</i>				
<p>A.1.1. Does the PoA-DD contain a clear, accurate and complete PoA description?</p> <p>(VVS, v. 3.0, §§ 64, 69)</p> <p><i>The PoA-DD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the programme activity and the technical aspects of its implementation.</i></p> <p><i>Pl. consider esp. chapters A.2, A.6 (in case of LSC) for assessment.</i></p> <p><i>§69 (a) Describe the process undertaken to validate the</i></p>	<p>/PoA-DD/ /IM01/ /IM02/ /IM03/</p>	<p><i>Description:</i></p> <p>The project description is given in the POA-DD. And the project involves the anaerobic animal manure management system in livestock farms to achieve methane recovery and destruction by combustion or gainful use.</p> <p><i>Validator's action:</i></p> <p>The technology employed was checked through on-site investigation, documents review and project owner, CME interviews.</p> <p><i>Conclusion:</i></p> <p>The POA-DD has contained a clear description of the project activity.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>accuracy and completeness of the programme description.</i> <i>§69 (b) Contain the DOE's opinion on the accuracy and completeness of the programme description.</i>				
A.1.2. Does the PoA-DD contain a clear, accurate and complete definition (including measures/ technology(ies) to be employed) of a CPA under the PoA? (VVS, v. 3.0, § 189)	/CPA-DD/ /PoA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>The technology and measure to be used in CAP is to reduce emissions is produce biogas through livestock manure through the installed anaerobic digester for biogas recovery and combustion, clear, accurate and complete definition has been defined in eligible criteria by taking the applied methodology into account..</p> <p><i>Validator's action:</i></p> <p>By means of crosschecking PoA-DD, related small scale methodology and onsite validation.</p> <p><i>Conclusion:</i></p> <p>The description of a typical CPA in the PoA-DD covers the technology and measure to be used. However, the description on baseline scenario and scenario prior to project implementation should be provided more in accurate manner.</p>	PoA-CAR-A1	OK
A.1.3. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the PoA and the CPAs will be implemented acc to the descriptions in the PoA-DD and the CPA-DD?	/CPA-DD/ /PoA-DD/ /AMS-III.D/ /GCC/	<p><i>Description:</i></p> <p>The PoA is located in Gansu province, P.R. China, and is coordinated and managed by CME, Lanzhou Hualong Poultry Breeding Co.</p> <p>The manure from livestock farm(s), which would be left to decay anaerobically without methane recovery and destruction in baseline scenario, will be firstly collected and fed into an adjustment pool, once the designed fermentation proportion fulfils the designated specification, the manure will be then fed into an anaerobic digester,</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<p>the organic matter will be converted into biogas under designed anaerobic conditions. The biogas will be further utilized for energy generation in Gansu province.</p> <p>The residual from the anaerobic treatment system will be collected for land application. The technology employed is environmentally safe and sound. The duration period of the PoA is 28 years.</p> <p><i>Validator's action:</i></p> <p>The real situation has been investigated during the site visit. It is observed that the project activity has been implemented as described in sections A.2 and A.6 of the POA-DD.</p> <p>Manure treatment facilities for CPA-0001 have been checked during onsite visit. The project design (the FSR) and the project construction plan (the general construction contract) for CPA-0001 been cross-checked.</p> <p><i>Conclusion:</i></p> <p>The project description in the CPA-DD is in accordance with the real situation.</p>		
<p>A.1.4. In case the programme involves alteration of an existing installation or process, is a clear description available regarding the differences between the programme and the pre-programme situation?</p> <p>(VVS, v. 3.0, § 68)</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p>/IM01/ /CPA- FSR/ /IM02/</p>	<p><i>Description:</i></p> <p>Not applicable since the project is a greenfield project and does therefore not involve the alteration of the existing installation or process.</p> <p><i>Validator's action:</i></p> <p>It was confirmed through on-site investigation, document reviews and local stakeholder interviews.</p> <p><i>Conclusion:</i></p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		The project doesn't involve the alteration of the existing installation of process.		
A.1.5. Has a sufficient description of the general operating and implementing framework of the PoA and its CPAs been given? (VVS, v.3.0, §189)	/PoA-DD/ /IM01/ /IM02/	<p><i>Description:</i></p> <p>The general operating and implementing framework of the PoA has been set and sufficiently described in the PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD has been checked against the paragraph 6 of Annex 38 EB 55.</p> <p><i>Conclusion:</i></p> <p>The description of operating and implementing framework of the PoA is sufficient.</p>	OK	OK
A.2. Small scale project activity <i>It is assessed whether the project qualifies as small-scale CDM PoA</i>				
A.2.1. Does the programme fall within the small scale project activity threshold and applies a large-scale approved methodology? In this case, are the modalities and procedures for large-scale project activities followed? (VVS, v. 3.0, § 151)	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>According to the applied methodology AMS-III.D, the aggregate emission reduction for a CPA from type III component is less than or equal to 60kt CO₂/yr, it can be concluded that the project falls into small-scale project activity. A small scale methodology AMS-III.D was applied in CPA within the PoA.</p> <p><i>Validator's action:</i></p> <p>By means of on-site investigation and CPA-DD checking.</p> <p><i>Conclusion:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		It is concluded that the each CPA under the PoA is SSC project, which has been stipulated in eligible criteria. Small scale methodology AMS-III.D is correctly applied.		
In case of project activities applying a LSC-Methodology, go to B.1				
<p>A.2.2. Does the programme qualify as a small scale PoA as defined in decision 4 / CMP.1 annex II?</p> <p>(VVS, v. 3.0, §§ 150–152)</p> <p><i>Please indicate whether the CPAs meet the eligibility criteria for small scale-projects. Especially consider whether the CPAs qualify within the thresholds of the three possible types of small-scale project activities</i></p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>According to the applied methodology AMS-III.D, the aggregate emission reduction for a CPA from type III component is less than or equal to 60kt CO₂/yr. Each CPA meets the eligibility criteria for small scale project.</p> <p><i>Validator's action:</i></p> <p>By means of on-site investigation and CPA-DD checking.</p> <p><i>Conclusion:</i></p> <p>Each CPA under the PoA is qualified as a small scale project.</p>	OK	OK
<p>A.2.3. Does the PoA make provisions for each CPA not to exceed the applicable threshold throughout the crediting period?</p> <p>(EB 65, Annex 3, §14 (k))</p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>According to the applied methodology AMS-III.D, the emission reduction for a CPA from type III should not exceed the threshold of 60ktCO₂/yr. It has been clearly addressed as eligible criteria for CPA inclusion</p> <p><i>Validator's action:</i></p> <p>The eligible criteria in PoA-DD defined the threshold for each CPA-DD (less than 60kt CO₂e annually)throughout the crediting period as per the applied methodology AMS-III.D.</p> <p><i>Conclusion:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		Requirements are fulfilled. It was involved as eligible criteria for CPA inclusion to ensure the SSC threshold are not exceeded.		
A.2.4. Are possible cross effects between CPAs (when applying multiple small scale methodologies) taken into account appropriately? (EB 65, Annex 3, §28)	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>The project applied one Small Scale methodology AMS-III.D. No multiple methodologies are applied.</p> <p><i>Validator's action:</i></p> <p>By means of PoA-DD and CPA-DD reviewing.</p> <p><i>Conclusion:</i></p> <p>It is not applicable to the PoA.</p>	N/A	N/A
A.2.5. Does the programme apply one of the approved small scale categories and any methodology(ies) and tool(s) referred therein? (VVS, v. 3.0., § 152 (b)) <i>Check, if applicable the expiry dates of the applied methodology(ies). Further, take into consideration the general guidance to the methodologies³, which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i>	/PoA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>The PoA-DD applied SSC methodology AMS-III.D in the webhosted PoA-DD, 'Methane recovery in animal manure management systems' ver. 18.0 approved at EB, valid from 2011-10-13 and the request for registration can be submitted until 2013-08-07. The referenced tools including "Tool to determine project emission from flaring gases containing methane" ver. 01 and "Tool to calculate the emission factor for an electricity system" ver. 02.2.1.</p> <p><i>Validator's action:</i></p> <p>The referred methodology and tools have been checked through the UNFCCC website.</p> <p><i>Conclusion:</i></p> <p>The project applied AMS-III.D ver. 18.0 which is assessed as</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		appropriate.		
<p>A.2.6. Are the small scale CPAs not debundled components of a larger project activity?</p> <p>(VVS, v. 3.0, §203 and EB 65, Annex 3, § 14(I))</p> <p><i>Describe the steps taken to assess whether the CPA is not a debundled component of a large scale activity, in accordance to the "Guidelines on assessment of debundling for SSC project activities".</i></p> <p><i>In case each of the independent subsystems/measures included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology (i.e. 150kW, 0.6 GWh, 0.6 ktCO₂e), then that CPA of the PoA is exempted from the de-bundling check, i.e. is considered as not being a debundled component of a large-scale activity</i></p>	/PoA-DD/	<p><i>Description:</i></p> <p>Section C of PoA-DD defines the provision which ensures that the SSC-CPA included in the PoA is not a de-bundled component of another CPA or CDM project activity according to EB54 Annex13: <i>Guidelines on assessment of debundling for SSC project activities.</i></p> <p><i>Validator's action:</i></p> <p>By checking of CDM pipeline and UNFCCC CDM website, it could be confirmed that the project owner doesn't have a registered project or projects under application.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the project is not a debundle component of a larger project activity, Which was involved in EC 19 for inclusion of a CPA.</p>	OK	OK
<p>A.3. Definition of a typical Component Project Activity (CPA)</p> <p><i>The description of a typical CPA is assessed. The eligibility criteria shall be checked for appropriateness and completeness.</i></p>				
<p>A.3.1. Has the POA-DD unambiguously defined a CDM programme activity (CPA) under the PoA?</p>	/PoA-DD/ /IM01/ /IM02/	<p><i>Description:</i></p> <p>The PoA-DD states the following CDM programme activity: "Animal Manure Treatment Programme in Gansu Province". The first CPA-0001 will be implemented within Gansu province. The CPA should be clearly identified as per eligible criteria.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<p><i>Validator's action:</i></p> <p>By means of PoA-DD checking (esp. the eligible criteria)and onsite interviews with government representatives.</p> <p><i>Conclusion:</i></p> <p>The PoA-DD unambiguously defined the CDM programme activity in section A.2.</p>		
<p>A.3.2. Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used?</p> <p><i>The PoA-DD shall contain a clear description of a typical CPA which provides the reader with a clear understanding of the precise nature of the project activity and the technology / measure to be used.</i></p> <p><i>Describe the process undertaken to validate the accuracy and completeness of the CPA description.</i></p>	/PoA-DD/ /CPA-FSR/	<p><i>Description:</i></p> <p>The technology and measure to be used in CPA is reducing the emissions by combusting the biogas generated through livestock manure through the installed anaerobic digester for gainful use.</p> <p><i>Validator's action:</i></p> <p>By means of crosschecking PoA-DD, related small scale methodology and onsite validation.</p> <p><i>Conclusion:</i></p> <p>The description of a typical CPA in the PoA-DD covers and in line with the technology and measure to be used as defined in PoA-DD.</p>	OK	OK
<p>A.3.3. Is all necessary information consistent between the finalized PoA-DD and the Generic CPA-DD?</p>	/PoA-DD/ /CPA-DD/ /XLS/	<p><i>Description:</i></p> <p>All the sections in Part II generic CPA is consistent with the finalized Part I PoA.</p> <p><i>Validator's action:</i></p> <p>By means of comparing the hosted version of PoA-DD.</p> <p><i>Conclusion:</i></p> <p>It is concluded that the necessary information is consistent between</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		the PoA-DD and the generic CPA-DD (the Part II of PoA-DD).		
A.3.4. Does the generic CDM-CPA-DD include Name/contact details of the entity/individual responsible for the operation of the CPA?	/PpA-DD/ /CPA-DD/ /IM01/ /IM02/	<p><i>Description:</i></p> <p>The responsible person and contact details of the entity responsible for operation of the CPA has been included in Annex 1 of the generic CPA-DD.</p> <p><i>Validator's action:</i></p> <p>By means of Part II: generic CPA-DD, Annex 1 and onsite interviews.</p> <p><i>Conclusion:</i></p> <p>No issues were raised.</p>	OK	OK
<p>A.3.5. Does the definition of eligibility criteria for inclusion of a CPA under the PoA include the following information:</p> <p>i) appropriate criteria for demonstration of additionality of the CPA, and</p> <p>ii) all type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility?</p> <p>(EB 65, Annex 3, §§ 8,9,10,11,12,13,14)</p> <p><i>Assess the specified eligibility criteria in the POA-DD in order to determine whether or not these criteria are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA, these requirements shall include, inter alia,</i></p>	/PpA-DD/ /CPA-DD/ /POAR-8/	<p><i>Description:</i></p> <p>All eligibility criteria have been clearly described, esp. w.r.t. the following points, and detailed assessments are included in Annex 7 of this report:</p> <ol style="list-style-type: none"> (1) Geographical requirement of the CPA boundary (2) Confirmation of no double-counting (3) Technical requirement of the CPA, including procurement (4) CPA start date not before PoA webhosting date (5) Methodology applicability requirement of the CPA (6) Other methodological / tool requirement of the CPA, (7) The additionality assessment criteria for each CPA are met (8) Environmental analysis requirement of the CPA (9) Public funding requirement of the CPA (10) CPA crediting period not exceed the PoA end date (11) Monitoring requirement of the CPA (12) Requirements/Provisions for meeting threshold criteria on CPA level (SSC, Microscale) (13) De-bundling criterion for the CPA (14) Other eligibility criteria applicable for CPA implementation 	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> <i>the means of demonstrating the additionality of the CPA and</i> <i>the applicability of the applied methodology.</i> <p><i>The eligibility criteria represents an essential element of ensuring the smooth functioning of programmatic CDM, therefore the validation team may raise CARs which ensure the ease of application of the eligibility criteria. (EB 65 annex 3 para 14 Footnote 2).</i></p> <p><i>Detailed assessment on the final criteria are included in the dedicated Annex A-6 of this report.</i></p>		<p><input type="checkbox"/> Not all eligibility criteria have been clearly described and following findings have been raised accordingly (after successful closure of all the findings, detailed assessments are to be included in Annex 7 of the final report):</p> <p>All applicability criteria defined in applied methodologies and tools should be included in eligible criteria for inclusion</p> <p><i>Validator's action:</i></p> <p>By means of methodology, related standards, technical data sheets and onsite validation.</p> <p><i>Conclusion:</i></p> <p>The extent of information is deemed to be sufficient to ensure its completeness of CPA inclusion eligibility criteria.</p>		
<p>A.3.6. Are the eligibility criteria defined verifiable, sufficiently objective and do allow to assess the inclusion of CPAs in the PoA?</p> <p>(EB 65, Annex 3, §§ 15,16)</p>	/PoA-DD/ /IM02/	<p><i>Description:</i></p> <p>The PoA-DD specified the eligible criteria for inclusion in section B.2 of PoA-DD.</p> <p><i>Validator's action:</i></p> <p>By means of PoA-DD. EB 65 Annex 3 checking and interview with the CME.</p> <p><i>Conclusion:</i></p> <p>The defined EC are assessed as verifiable, objective for inclusion of a CPA in the PoA.</p>	OK	OK
<p>A.3.7. In case of combination of technologies/measures and or methodologies: have distinct eligibility criteria been developed</p>	/PpA-DD/ /CPA-	<p><i>Description:</i></p> <p>The PoA applied single methodology AMS-III.D, this is not applicable to the PoA.</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
for each type of CPA? (EB 65, Annex 3, §§ 20,29)	DD/	Validator's action: - Conclusion:-		
A.3.8. In case of combination of technologies/measures and or methodologies: have provisions been made to ensure the compliance of a CPA using technologies/measures from several methodologies with all the eligibility criteria derived from the requirements of all the methodologies and are those described in the PoA-DD? (EB 65, Annex 3, §§ 27)	/PpA-DD/ /CPA-DD/	Description: The PoA applied single methodology AMS-III.D, this is not applicable to the PoA. Validator's action: - Conclusion:-	N/A	N/A
B. Project Baseline, Additionality and Monitoring Plan				
B.1. Reference of the Methodology				
B.1.1. Do the PoA-DD and the generic CPA-DD correctly quote an applicable version of the methodology? (VVS, v. 3.0, § 74)	/unfccc/ /PoA-DD/	<input checked="" type="checkbox"/> The applied methodology is correctly quoted and is identical to the version available on the UNFCCC website. <input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is applicable and valid at the time of submission for stakeholder consultation. The project activity applies the approved SSC methodology AMS-	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		III.D. ver. 18.0.		
B.2. Applicability of the Methodology				
<p>B.2.1. Does the programme apply (an) PoA-approved and applicable CDM methodology(ies)and (a) valid version(s)thereof?</p> <p>(VVS, v. 3.0, §§ 70, 74, 76, 77)</p> <p><i>Describe the steps taken to validate this issue.</i></p> <p><i>Describe for <u>each</u> applicability criterion listed in the selected approved methodology the steps taken to assess its fulfilment</i></p>	<p>/unfccc / /PoA-DD/</p>	<p><input checked="" type="checkbox"/> The applied methodology is correctly quoted and is identical to the version available on the UNFCCC Website.</p> <p><input checked="" type="checkbox"/> The applied version of the baseline and monitoring methodology is valid at the time of submission for stakeholder consultation.</p> <p><input checked="" type="checkbox"/> All applicability criteria in the methodology, the applied tools or any other methodology component referred to therein are fulfilled (please make detailed assessment in Annex 2 of this protocol).</p> <p><i>However, the change of applied methodology in PoA-DD version 01 and version 04 should be clarified.</i></p>	<p>PoA- CAR- B1</p>	<p>OK</p>
<p>B.2.2. In case of multiple methodologies: do the PoA-DD and the generic CPA-DD list all combinations of technologies/measures and/or approved methodologies that will be implemented in the PoA and define separate eligibility criteria for each of them?</p> <p>(EB65, Annex 3, §26)</p>	<p>/PoA-DD/</p>	<p>Not applicable, the project applies single SSC methodology AMS-III.D.</p>	<p>N/A</p>	<p>N/A</p>
<p>B.2.3. In case of multiple methodologies: is the combination of technologies/measures and/or methodologies approved?</p> <p>(EB 65, Annex 3, §§29,30,32,33)</p>		<p>Not applicable, the project applies single SSC methodology AMS-III.D.</p>	<p>N/A</p>	<p>N/A</p>

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.2.4. In case one or more applicability criteria of the methodology(ies) have not been met, has the validation team requested clarification to, revision of or deviation from the methodology(ies) in accordance with the latest guidelines? (VVS, v. 3.0, §§ 78-81)		Not applicable, the project applies single SSC methodology AMS-III.D.	N/A	N/A
B.3. PoA and CPA Boundaries <i>Project Boundaries are the limits and borders defining the GHG emission reduction programme</i>				
B.3.1. Are the PoA's spatial boundaries (geographical) within which all CPAs included in the PoA will be implemented clearly defined? (VVS, v. 3.0, §§ 72 (a), 82, 191) <i>Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	/CPA-DD/ /AMS-III.D/ /unfccc /	<i>Description:</i> In the CPA-DD, the project boundary was defined as the physical, geographical site of livestock, animal manure management system, facilities for biogas recovery and utilization for energy generation. <i>Validator's action:</i> By means of checking on PoA-DD, the CPA-DD and methodology AMS-III.D. <i>Conclusion:</i> CL-CPA-B1 has been raised.	CL-CPA-B1	OK
B.3.2. Are all sources and GHGs included in the PoA/CPA boundary as required in the applied	/CPA-	<i>Description:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
methodology? (VVS, v. 3.0, §§ 82, 84) <i>Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	DD/ /AMS-III.D/ /unfccc/ /	Emission sources and gases (the CO ₂ and CH ₄) are included in the project boundary are listed in a table. <i>Validator's action:</i> The emission sources and gases were included in the table and diagram according to methodology and assessed as credible through document review and on-site investigation. <i>Conclusion:</i> All sources and GHGs are included in the project boundary as required in the applied methodology.		
B.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified? (VVS, v. 3.0, §§ 84, 87) <i>Confirm if the adequacy provided by the PPs is reasonable, based on assessment of supporting documented evidence provided by the PPs or by onsite observations.</i>		N/A	N/A	N/A
B.3.4. Are provisions in place in case the implementation of a CPA might lead to emissions contributing more than 1% of the overall expected average annual emissions reductions within the project boundary and which are not addressed by the selected approved methodology? (VVS, v. 3.0, § 87)	/AMS-III.D/ /unfccc/ /dna/	<i>Description:</i> No additional GHG emissions within the project activity, which are expected to contribute more than 1% of the overall expected average annual emission reductions are either addressed by the methodology or considered. <i>Validator's action:</i> By means of desk review, onsite visit and crosschecking the applied methodology AMS-III.D.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>Describe the steps taken to validate this issue. If any emission sources that are expected to contribute more than 1% have been identified, the DOE shall request clarification of, revision to, or deviation from the methodology, as appropriate.</i>		<p><i>Conclusion:</i></p> <p>No additional GHG emissions which are not addressed by the methodology occur.</p>		
<p>B.4. Baseline Identification</p> <p><i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i></p>				
<p>B.4.1. Has the baseline scenario been determined according to the methodology?</p> <p>(VVS, v. 3.0, §§ 72 (b), 89, 87(e))</p> <p><i>Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.</i></p>	<p>/AMS-III.D/ /PoA-DD/</p>	<p><input checked="" type="checkbox"/> The baseline is defined by the applied methodology and the PoA-DD refers to it. If the answer is Yes, continue to B.4.5</p> <p><input type="checkbox"/> The baseline is not directly defined by the applied methodology.</p> <p>For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2.</p> <p><input type="checkbox"/> The determination has been carried out as per the procedure contained in the applied methodology.</p> <p><input type="checkbox"/> The following CARs / CLs have been identified with respect to the selection of the baseline scenario:</p>	OK	OK
<p>B.4.2. Is the list of alternatives complete?</p> <p>(VVS, v. 3.0, § 90)</p>		<p><input type="checkbox"/> All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p><i>Describe how it was validated that all alternatives are plausible and that any scenarios that are supplementary to those required by the methodology are realistic and credible in the context of the project activity and that no alternative scenarios have been excluded.</i></p> <p><i>Fill in all alternatives in table A-2.</i></p>		<p>alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been excluded.</p> <p><input type="checkbox"/> The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued</p> <p>The baseline was defined in AMS-III.D ver. 18.0.</p>		
<p>B.4.3. Is the identified baseline scenario reasonable considering all possible types of CPAs and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources?</p> <p>(VVS, v. 3.0, § 91)</p> <p><i>Describe whether the choice of the identified baseline scenario is reasonable by validating the <u>key assumptions, calculations and rationales</u> used in the PoA-DD. Describe whether these are listed, relevant and <u>conservatively interpreted</u> in the PoA-DD.</i></p>		<p><input type="checkbox"/> The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2..</p> <p><input type="checkbox"/> The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative</p> <p>The baseline was defined in AMS-III.D ver. 18.0.</p>	N/A	N/A
<p>B.4.4. Does the baseline scenario sufficiently take into account all relevant national and/or sectoral policies within the chosen project boundary such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector.?</p> <p>(VVS, v. 3.0, §§ 93, 192)</p> <p><i>Describe whether the PP has shown that all relevant policies</i></p>		<p>The baseline was defined in AMS-III.D ver. 18.0.</p>	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p><i>and circumstances have been identified and correctly considered in the PoA-DD. Two (2) types of national and/or sectoral policies have to be taken into account:</i></p> <p><i>(a) National and/or sectoral policies or regulations that give comparative advantages to more emissions-intensive technologies or fuels over less emissions-intensive technologies or fuels, known as E+ policies. For this type of national and/or sectoral policies or regulations, only those that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997) shall be taken into account</i></p> <p><i>(b) National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programmes), known as E- policies. For this type of national and/or sectoral policies or regulations, those that have been implemented since the adoption by the COP of the CDM M&P (decision 17/CP.7, 11 November 2001) need not be taken into account in identifying a baseline scenario.</i></p>				
<p>B.4.5. What has been identified as the baseline scenario? Does the PoA-DD contain a <i>verifiable</i> description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM programme activity?.</p>	<p>/PoA-DD/ /AMS-I.C/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>As per AMS-III.D, the baseline scenario is the situation that the animal manure left to decay anaerobically within the project boundary and methane is emitted to the atmosphere.</p> <p><i>Validator's action:</i></p> <p>By means of methodology, PDDs and onsite assessment of the validation team.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
(VVS, v. 3.0, § 88)		<p><i>Conclusion:</i></p> <p>The baseline scenario was clearly defined in accordance with the methodologies AMS-III.D.</p>		
<p>B.5. Additionality Determination</p> <p><i>The assessment of additionality will be validated with focus on whether the programme / CPA itself is not a likely baseline scenario.</i></p>				
B.5.1. Methodology				
<p>B.5.1.1. Does the PoA-DD describe how the programme is additional (i.e. that none of the implemented CPAs would occur in absence of the CDM) and does the additionality justification follow the requirements of the applied methodology and/or methodological tools?</p> <p>(VVS, v. 3.0, §§ 72 (d), 101-102 and EB65, Annex 3, §7)</p> <p><i>Describe how it is validated that the additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.</i></p>	<p>/PoA-DD/ /AMS-I.C/ /AMS-III.D/ /POAR / /Tool/</p>	<p><i>Description:</i></p> <p>By taking the "Guideline for demonstrating additionality of micro-scale project activities" and "Guidelines on the demonstration of additionality of small-scale project activities", into account, step-wise approaches were adopted for additionality assessment.</p> <p>Step 1: As per "Guidelines for demonstrating additionality of microscale project activities" (Version 4.0):</p> <p>The CPA under the PoA is deemed additional if it can satisfy the microscale applicability criteria.</p> <p>Step 2: As per positive list of technologies and project activity types in the "Guidelines on the demonstration of additionality of small-scale project activities" (Version 9.0).</p> <p>Step 3: As per investment barrier in the "Guidelines on the demonstration of additionality of small-scale project activities".</p> <p><i>Validator's action:</i></p> <p>The methodology and the relevant guidelines have been checked.</p>	<p>CL-CPA-B2</p>	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<i>Conclusion:</i> CL-CPA-B2 has been raised.		
B.5.2. Assessment and Demonstration of Additionality of the PoA as a whole				
B.5.2.1. Has it been demonstrated that: <ul style="list-style-type: none"> in the absence of the CDM the proposed voluntary coordinated action would not be implemented, or in the absence of the CDM the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. 	/PoA-DD/ /IM01/ /IM02/	<i>Description:</i> The stated goal of the related CDM programme activity is defined in the PoA-DD and tries to demonstrate the following situation in the absence of the programme activity: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The proposed voluntary measure would not be implemented. <input checked="" type="checkbox"/> The mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region. <input checked="" type="checkbox"/> The PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. <i>Validator's action:</i> By means of crosschecking PoA-DD and relevant national regulations and standards. <i>Conclusion:</i> All the issues lined out in the left table were sufficiently demonstrated.	OK	OK
B.5.3. Assessment and Demonstration of CPA Additionality/Identification of alternatives Step 1 (in case of SSC projects pl. skip steps 1 and 2 if appropriate; in cases where the baseline scenario is prescribed in the approved methodology, skip step 1, (VVS, v. 3.0, § 115))				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>B.5.3.1. Does the list of alternatives contain the status-quo situation, the programme not undertaken as a CDM project as well as all other viable alternatives for supplying the outputs or services that are to be supplied by the proposed CDM programme activity? Do all identified alternatives comply with enforced legislations?</p> <p>(VVS, v. 3.0, §§ 114, 116)</p> <p><i>Describe whether the list of alternatives is credible and complete. Describe how it is validated that the list of alternatives is complete, realistic and that the alternatives are credible and that all alternatives comply with the existing and enforced legislation.</i></p> <p><i>Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.</i></p>		<p><i>Not applicable, The PoA is SSC project.</i></p>	N/A	N/A
<p>B.5.4. Assessment and Demonstration of CPA Additionality Investment analysis Step 2</p> <p><i>In case the investment analysis as per step 2 is chosen to justify the additionality Annex 4 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..</i></p>				
<p>B.5.4.1. Does the project documentation provide evidence that the project would not be the most economically or financially</p>	/PoA-DD/	<p>Description: as defines in step 3, benchmark will be applied for SSC CPA, only in case, the project IRR (w/o the revenues from CER) below the defined benchmark, the CPA will be assessed as financial</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>attractive alternative or economically / financially feasible without the revenues from the sale of CERs?</p> <p>(VVS, v. 3.0, § 117)</p> <p><i>In cases where the project activity would produce no financial or economic benefits other than CDM-related income, describe how it has been validated that at least on of the alternatives identified is less costly than the proposed project activity.</i></p>	/CPA-DD/	<p>unattractive.</p> <p>Justification of evidence: The section B.5 of PoA-DD part II has been checked against the "Guidelines on the demonstration of additionality of small-scale project activities"</p> <p>Conclusion: Appropriate provision has been defined.</p>		
<p>B.5.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation?</p> <p>(EB 62 Annex 5 , §8)</p> <p><i>Describe the steps taken to validate this issue.</i></p>	/IA/	<p><input checked="" type="checkbox"/> Yes, a clear, viewable and unprotected Excel spreadsheet is available for 1st real case CPA-0001</p> <p><input type="checkbox"/> No, a respective Excel spreadsheet needs to be made available for investment calculation.</p>	OK	OK
<p>B.5.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?</p> <p>(EB 62 Annex 5 § 3)</p> <p><i>Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a</i></p>	<p>/PoA-DD/</p> <p>/CPA-DD/</p> <p>/IA/</p>	<p><i>Description:</i> The chosen period of 15 years reflect and equal to the technical lifetime of 1st real case CPA, the fixed asset residue has also been included as cash inflow.</p> <p><i>Justification of evidence:</i> The section B.5 of PoA DD, the investment analysis for 1st real case CPA has been checked against guidelines and tool.</p> <p><i>Conclusion:</i> the project lifetime is determined as per manufacture specification and was reflected in investment analysis of CPA, the fair value is included in cash flow in 15th year of calculation period.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>potential fair value.</i>				
<p>B.5.4.4. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice?</p> <p>(EB 62 Annex 5, § 4)</p> <p><i>State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.</i></p>	/PoA-DD/ /CPA-DD/	<p><i>Description:</i> Not applicable</p> <p><i>Justification of evidence:</i> The section of PoA-DD has been checked against the guidelines and tool.</p> <p>The national financial evaluation standards have been checked to confirm the exclusion of the criteria.</p> <p><i>Conclusion:</i> It is not applicable.</p>	N/A	N/A
<p>B.5.4.5. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?</p> <p>(EB 62 Annex 5, § 4)</p>	/PoA-DD/ /CPA-DD/	<p><i>Description:</i> Not applicable</p> <p><i>Justification of evidence:</i> The section B.5. of PoA-DD has been checked against the guidelines and tool.</p> <p>The national financial evaluation standards have been checked to confirm the exclusion of the criteria.</p> <p><i>Conclusion:</i> It is not applicable.</p>	N/A	N/A
<p>B.5.4.6. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)?</p> <p>(EB 65 Annex 21, EB 62, Annex 5, §19)</p> <p><i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available</i></p>	/PoA-DD/ /CPA-DD/ /IA/	<p><i>Description:</i> the simple cost analysis and investment comparison analysis were assessed to be inapplicable, due to facts: 1) the project get benefit also from the utilization of biogas and 2) the project scenario is not comparable with baseline scenario.</p> <p>Benchmark approach will be adopted for project as per defined condition in step-wise additionality assessment.</p> <p><i>Justification of evidence:</i> The section B.5 of PoA DD has been checked against the applied guidelines and tool.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p><i>benchmark values.</i></p> <p><i>Assess whether the alternative to the CPA is to supply the same or substitute products or services. In this case, an investment comparison analysis shall be used.</i></p>		<p><i>Conclusion:</i> the check point is fulfilled.</p>		
<p>B.5.4.7. Were the input values used in the investment analysis valid and applicable at the time of the investment decision?</p> <p>(EB 62 Annex 5, § 6)</p> <p><i>Describe the steps taken to validate this issue</i></p>	<p>/PoA-DD/ /CPA-DD/ /IA/</p>	<p><i>Description:</i> the input value during the time of investment decision making will be applied for investment analysis (benchmark approach).</p> <p><i>Justification of evidence:</i> The sections B.5 of PoA DD investment analysis for 1st real case CPA have been checked against the guidelines and tool.</p> <p><i>Conclusion:</i> input value during the investment decision making will be applied for benchmark approach, with clear reference on relevant evidence.</p>	OK	OK
<p>B.5.4.8. Are the input parameters based on values from Feasibility Study Reports that are approved by national authorities for proposed project activities?</p> <p>(VVS, v. 3.0, § 122)</p> <p><i>In case the basis for input values is a Feasibility Study Report (FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed. Further confirm the consistency of values in FSR and POA-DD.</i></p>	<p>/PoA-DD/ /CPA-DD/ /IA/</p>	<p><i>Description:</i> the input value from approved project feasibility study report will be adopted for benchmark assessment for the project activity in CPA.</p> <p><i>Justification of evidence:</i> The sections B.5 of PoA-DD and investment analysis for 1st real case CPA have been checked against the guidelines and tool.</p> <p><i>Conclusion:</i> input value from the approved FSR will be applied for benchmark analysis, with clear reference on relevant evidence.</p>	OK	OK
<p>In case a simple cost analysis has been done, go to B.4.5;</p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>B.5.4.9. Has been a suitable financial indicator chosen by the project participants? (VVS, v. 3.0, § 120 (a))</p> <p><i>Describe the steps taken to validate this issue.</i></p>	<p>/PoA-DD/ /CPA-DD/ /IA/</p>	<p><i>Description:</i> the benchmark for stocking farming sector has been defined for project activity, which is derived from national financial evaluation standard and widely applied in host country for similar project activities. If the IRR is below the benchmark will be assessed as financial unattractive.</p> <p><i>Justification of evidence:</i> The section B.5 of PoA DD has been checked against the guidelines and tool</p> <p><i>Conclusion:</i> The benchmark is suitable for project and the additionality will only be evidenced in case a lower the IRR</p>	OK	OK
<p>B.5.4.10. Are depreciation and other non-cash related items only considered in the tax calculation and not as cash outflow? (EB 62 Annex 5, § 5)</p>	<p>/PoA-DD/ /CPA-DD/ /IA/</p>	<p><i>Description:</i> Not applicable, as per national financial evaluation standards, the depreciation and other non-cash items will be only considered by tax calculation.</p> <p><i>Justification of evidence:</i> The section B5.1 of PoA DD has been checked against the guidelines and tool; the national financial evaluation standards have been checked to confirm the exclusion of the criteria.</p> <p><i>Conclusion:</i> It is not applicable.</p>	N/A	N/A
<p>B.5.4.11. Is the plant load factor (PLF) chosen in a conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER? (EB 48, Annex 11)</p>		N/A	N/A	N/A
<p>B.5.4.12. Does the CPA-DD and related spreadsheets contain a sensitivity analysis</p>	<p>/PoA-DD/</p>	<p><i>Description:</i> The fixed assets investment, the annual O&M cost and Annual generated biogas amount have been selected for sensitivity</p>	<p>CL-CPA-</p>	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>and does the same contain variation of parameters which may vary throughout the project lifetime?</p> <p>(EB 62 Annex 5, § 20-21)</p> <p><i>Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.</i></p>	/CPA-DD/ /IA/	<p>analysis, which mainly contribute to project cost and benefit.</p> <p>Even with reasonable variation (+/-10%), the IRR shall still below than benchmark.</p> <p><i>Justification of evidence:</i> The section of PoA-DD has been checked against the guidelines and tool.</p> <p><i>Conclusion:</i> CL-CPA-B2 has been raised.</p>	B2	
<p>B.5.4.13. Were only variables that constitute more than 20% of either total project costs or total project revenues subjected to reasonable variation?</p> <p>(EB 62 Annex 5, § 20)</p>	/PoA-DD/ /CPA-DD/ /IA/	<p><i>Description:</i> The fixed assets investment, the annual O&M cost, biogas amount have been selected for sensitivity analysis, which mainly contribute to project cost and benefit.</p> <p><i>Justification of evidence:</i> The section of PoA DD has been checked against the guidelines and tool.</p> <p><i>Conclusion:</i> adequate financial parameters were chosen for a robust sensitivity analysis.</p>	OK	OK
<p>B.5.4.14. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential material impact on the financial parameter?</p> <p>(EB 62 Annex 5, § 20)</p> <p><i>Describe whether those parameters are considered in the sensitivity analysis?</i></p>	/PoA-DD/ /CPA-DD/ /IA/	<p><i>Description:</i> The fixed assets investment, the annual O&M cost, biogas amount have been selected for sensitivity analysis, which mainly contribute to project cost and benefit.</p> <p><i>Justification of evidence:</i> The section B5.1 of PoA DD has been checked against the guidelines and tool.</p> <p><i>Conclusion:</i> adequate financial parameters were chosen for a robust sensitivity analysis.</p>	OK	OK
<p>B.5.4.15. Is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector?</p>	/PoA-DD/ /CPA-	<p><i>Description:</i> reasonable variation range (+/-10%) has been defined and suitable for project specific. The range is compliance with national financial standard and appropriate with the historic developments in business sector.</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
(EB 62 Annex 5, § 21) <i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i>	DD/ /IA/	<i>Justification of evidence:</i> The section of PoA DD has been checked against the guidelines and tool. <i>Conclusion:</i> a reasonable range of variation has been chosen taking the project specific historic business development into account.		
B.5.4.16. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? (EB 62 Annex 5, § 9)	/PoA-DD/ /CPA-DD/ /IA/	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Yes, the costs of financing expenditures have been excluded. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified: N/A	OK	OK
B.5.4.17. In case of equity IRR: Is the part of the investment costs, which is financed by equity, considered as net cash outflow and is the part financed by debt excluded in net cash outflow? (EB 62 Annex 5, § 10)		<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Yes, in- and outflows have been considered correctly. <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified: N/A	N/A	N/A
In case a comparison analysis has been done, go to B.5.5				
B.5.4.18. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for		<i>Description:</i> Not applicable, the benchmark is calculated as per national financial evaluation standards, which is different with bank lending rate and WACC (weighted average costs of capital)	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
project IRR; required/expected returns on equity for equity IRR)? (EB 62 Annex 5, §12) <i>Describe the steps taken to validate this issue.</i>		<i>Justification of evidence:</i> The section of PoA-DD has been checked against the guidelines and tool. <i>Conclusion:</i> It is not applicable.		
B.5.4.19. Is a pre-tax benchmark applied in case of project IRR is calculated? In cases where a post-tax benchmark is applied, assess whether actual interest payable is taken into account in the calculation of income tax. (EB 62 Annex 5, § 11) <i>If this is not the case, ensure that taxation is excluded from the investment analysis. As per the guidance it is recommended to select a pre tax benchmark in order to describe the steps taken in assessing this requirement.</i>	/PoA-DD/ /CPA-DD/ /IA/	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> A pre-tax benchmark is applied <input type="checkbox"/> The benchmark is post-tax and the interest has been taken into account for the calculation <input type="checkbox"/> No, this requirement is not met. In this context the following additional findings have been identified: N/A	OK	OK
B.5.4.20. Have both benchmark and cash flows expressed consistently, i.e. real terms (excluding the effect of inflation) or nominal terms? <i>Describe the steps taken to validate this issue.</i>	/PoA-DD/ /CPA-DD/ /IA/	<i>Description:</i> the benchmark was calculated consistently with cash flows as per provision in national financial standard and guidelines for investment analysis. <i>Justification of evidence:</i> The section of PoA-DD, the IRR of 1 st real case has been checked against the guidelines and national financial standard. <i>Conclusion:</i> The benchmark was calculated consistently with cash flows.	OK	OK
B.5.4.21. Is the benchmark value suitable for the project activity and is it reasonable to	/PoA-DD/	<i>Description:</i> the benchmark for stocking farming sector has been chosen for project activity; it is derived from national financial	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>assume that no investment would be made at a rate of a lower return than the benchmark?</p> <p>(VVS, v. 3.0, § 121 (c))</p> <p><i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i></p>	<p>/CPA-DD/ /IA/</p>	<p>evaluation standard and widely applied in host country for similar project activities. If the IRR is below the benchmark will be assessed as financial unattractive.</p> <p><i>Justification of evidence:</i> The section B.5 of PoA DD has been checked against the guidelines and tool</p> <p><i>Conclusion:</i> The benchmark is suitable for project and the additionality will only be evidenced in case a lower IRR</p>		
<p>B.5.4.22. Is the benchmark applied based on parameters that are available and standard in the market?</p> <p>(VVS, v. 3.0, 121 (b), EB 62 Annex 5, §§13, 15, 16, 18)</p> <p><i>Assess whether company-specific benchmarks or benchmarks based on parameters that are available in the market are suitable to the project activity. A benchmark that includes the subjective profitability expectations or risk profile of the project developer (size risk premiums, company own risk premium, etc) is not suitable for project activities open to be developed by other entities.</i></p> <p><i>If cost of equity is applied, assure that best financial practices are used and are based on data sources which can be cross-checked against third-party or publicly available sources.</i></p> <p><i>If cost of debt is used for the calculation of the benchmark, ensure that it is calculated as the cost of financing in the capital markets (e.g: commercial lending rates)</i></p> <p><i>If the cost/equity financing structure of the project is not yet available, 50% equity, 50% debt financing may be assumed as default.</i></p>	<p>/PoA-DD/ /CPA-DD/ /IA/</p>	<p><i>Description:</i> The benchmark for stocking farming sector has been chosen for project activity, it is derived from national financial evaluation standard and widely applied in host country for similar project activities. If the IRR is below the benchmark will be assessed as financial unattractive.</p> <p><i>Justification of evidence:</i> The section B.5 of PoA DD has been checked against the guidelines and tool</p> <p><i>Conclusion:</i> The benchmark is suitable for project and the additionality will only be evidenced in case a lower IRR</p>	OK	OK
Following checklist is intended for cases where internal company benchmarks are applied, otherwise go to				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.5.5				
<p>B.5.4.23. Is it ensured that the project cannot be developed by other developers than the PP, so that internal company benchmarks or expected returns are suitable for the project activity?</p> <p>(EB 62 Annex 5, §§ 13 – 14) <i>Describe how it has been validated that there is only one possible project developer.</i></p>		N/A	N/A	N/A
<p>B.5.4.24. Was the benchmark consistently used in the past by the same company for similar projects with similar risks?</p> <p>(EB 62 Annex 5, § 14) <i>If applicable, assess the past financial behaviour of the entity during the last 3 years in relation to similar projects.</i></p>		N/A	N/A	N/A
<p>B.5.4.25. Was the cost of debt calculated based on the weighted average cost of debt financing of the legal entity owning the CDM project activity?</p> <p>(EB 62 Annex 5, § 16) <i>If applicable, assess whether loans, bonds or debt financing from a parent company are calculated according to the latest "Guidance on Investment Analysis".</i> <i>In case that the debt structure of the project is not yet</i></p>		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>available, the cost of debt can be assumed as the commercial lending rate in the company or the yield of a 10-year bond issued by the government of the host county.</i>				
<p>B.5.4.26. Does the equity/debt ratio of the project reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity? (EB 62 Annex 5, § 17)</p> <p><i>Assess the latest balance sheets of the legal entity owning the assets of the project activity, in case these are available and audited by a third party within two years prior to the submission of the CPA-DD for validation, and the accounting books reflect the total value of all assets needed for the project activity.</i></p> <p><i>If debt/equity financing structure is not available, 50% equity, 50% debt shall be considered as default.</i></p>		N/A	N/A	N/A
B.5.5. Assessment and Demonstration of CPA AdditionalityBarrier analysis Step 3 or SSC additionality assessment				
<p>B.5.5.1. Are there any barriers given which have a clear and direct impact on the financial returns of the project? (VVS, v. 3.0, § 125)</p> <p><i>In case of LSC projects those issues <u>cannot be considered</u> as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall</i></p>		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>apply, i.e. the assessment of the investment barrier according to EB 62 Annex 5. Only unavailability of sources of finance and/or risk related barriers, for example, the risk related to technical failure that could have negative impact on financial performance are acceptable as barriers.</i>				
B.5.5.2. Has the unavailability of means of finance for the project been described and adequately substantiated? Do evidences doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM? (EB 50 Annex 13, § 9)		N/A	N/A	N/A
B.5.5.3. Would provision of additional financial means lead to the mitigation of the barrier(s) demonstrated? (EB 50 Annex 13, § 7) <i>Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence analysing the project's additionality within the framework of an investment analysis is inappropriate. .</i>		N/A	N/A	N/A
B.5.5.4. How is it justified and evidenced that the barriers given in the PoA-DD / CPA-DD are real? (VVS, v. 3.0, § 126(a))		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.5.5.5. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives? (VVS, v. 3.0, § 126 (b))		N/A	N/A	N/A
B.5.5.6. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real? (EB 50 Annex 13, § 4)		N/A	N/A	N/A
B.5.5.7. Has it been demonstrated in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers? (EB 50 Annex 13, § 5)		N/A	N/A	N/A
B.5.6. Assessment and Demonstration of CPA Additionality Common practice analysis Step 4 (in case of SSC projects or first-of-its-kind LSC projects skip this step)				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>B.5.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type?</p> <p>(VVS, v. 3.0, § 129(a)) <i>Describe why the project activity is not common practice in a transparent and unambiguous manner. If a region other than the entire host country is chosen, describe why this region is more appropriate.</i></p>		N/A	N/A	N/A
In case of projects activities applying ACM002, go to B.5.6.4				
<p>B.5.6.2. To what extent similar projects have been undertaken in the relevant region?</p> <p>(VVS, v. 3.0, § 129(b)) <i>Similar projects are considered those that take place in a comparable environment w.r.t. regulatory framework, investment climate, access to technology and financing, etc. Registered CDM PA and PA that have been published on the UNFCCC website are not to be considered as similar.</i></p>		N/A	N/A	N/A
<p>B.5.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed?</p> <p>(VVS, v. 3.0, § 129(c))</p>		N/A	N/A	N/A
B.5.6.4. Has an output range as +/- 50% of the		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
design output of the project activity been calculated in order to define the capacity range for “similar” projects? (EB65 Annex 21, § 47)				
B.5.6.5. Does N_{all} include only plants that have started commercial operation before the the start date of the project and are within the applicable output range? (EB65 Annex 21, § 47) <i>Under N_{all}, registered CDM projects and projects undergoing validation are not to be included.</i>		N/A	N/A	N/A
B.5.6.6. Does N_{diff} include only plants that apply different “technology” than the project activity? (EB65 Annex 21, §§ 9, 47) <i>The term “technology” refers to energy fuel, investment climate (access to technology, subsidies, legal regulations, etc...) or unit cost of output.</i> <i>Assess how the essential distinctions to identify the different measures have been carried out.</i>		N/A	N/A	N/A

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.6. Algorithms and/or formulae used to determine emissions reductions <i>It is assessed whether the steps taken and the equations and parameters applied in the POA-DD/CPA-DD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).</i>				
B.6.1. Are the equations applied correctly according to the applied approved methodology? (VVS, v. 3.0, §§ 72(c), 96) <i>Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data and parameter values provided in the programme documentation</i>	/AMS-III.D/ /unfccc/ /dna/	<input checked="" type="checkbox"/> The equations applied for calculation are correctly applied according to the approved methodology. <input type="checkbox"/> The following mistakes have been identified in this context: <i>Description:</i> the equations for baseline emission, project emission and emission reductions have been correctly applied in line with applied methodology. <i>Validator's action:</i> The methodology and referenced tools have been checked. <i>Conclusion:</i> The applied equations are correct.	OK	OK
B.6.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)? (VVS, v. 3.0, §§ 97, 98) <i>Assess the correct selection and application of</i>	/PoA-DD/ /AMS-III.D/	<i>Description:</i> The methodology doesn't allow any choices. The applied equations are consistent with the methodology. <i>Validator's action:</i> The methodology has been checked. <i>Conclusion:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of activity typical CPA and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i>		The choice and calculations comply with methodology and are well evidenced.		
B.6.3. Have conservative assumptions been used when calculating the emission emissions? (VVS, v. 3.0, §§ 98, 99(a)) <i>Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the POA-DD/CPA-DD including references and sources and are conservatively interpreted in the POA-DD/CPA-DD.</i>	/PoA-DD/ /AMS-III.D/	<i>Description:</i> According to AMS-III.D, conservative assumptions are considered in calculation. <i>Validator's action:</i> The methodology and PoA-DD were checked. <i>Conclusion:</i> It is confirmed that the conservative assumptions have been used in project emission calculation.	OK	OK
B.6.4. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions? (VVS, v. 3.0, § 98) <i>Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the programme activity and typical CPA.</i>	/PoA-DD/ /AMS-III.D/ /GEF/ /XLS/	<i>Description:</i> The data and parameters which remain fixed throughout the crediting period are based on default values defined in the methodology, related tools and further reliable sources. The calculation of the grid emission factor is officially prepared by the Chinese DNA. <i>Validator's action:</i> The methodology, the tools have been checked. <i>Conclusion:</i> The data and parameters which remain fixed during the crediting period are assessed to be credible and lead to a conservative result of emission reductions.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.6.5. Are all ex-ante calculation values for monitoring parameters (as defined per chapter B.7.1) reasonable? (VVS, v. 3.0, § 98) <i>Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i>	/PoA-DD/ /dna/	<input checked="" type="checkbox"/> All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative. <input type="checkbox"/> The following mistakes have been identified in this context:	OK	OK
B.6.6. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change? <i>Describe the steps taken to validate this issue.</i>	/PoA-DD/ /AMS-III.D/	<i>Description:</i> The emission reductions are real, measurable and give long-term benefits related to the mitigation of climate change. <i>Validator's action:</i> The emission reduction is checked with the methodology, the referenced tool and data collection and analysis included in the FSR which is done by a qualified third party. <i>Conclusion:</i> It's assessed to be credible.	OK	OK
B.7. Operational, Management and Monitoring Plan of the PoA <i>It is assessed whether the operational, management and monitoring plan is appropriate for the project activity and in line with the applied methodology.</i>				
B.7.1. Operational and Management Plan				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
B.7.1.1. Has the coordinating/managing entity established the operational and management arrangements for the implementation of the PoA, which includes a clear definition of roles and responsibilities of personnel involved in the CPA inclusion (i.a. their competencies) as well as records of arrangements for training and capacity development? (EB70, Annex 5,)	/PoA-DD/ /POAR/ /	<p><i>Description:</i></p> <p>An operation and management plan, the responsibility of the personnel and entities and a feasible management system are transparently established and addressed in PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and EB70 Annex 5 were checked by the validation team.</p> <p><i>Conclusion:</i></p> <p>The CME has established the operational and management arrangements for the implementation of the PoA.</p>	OK	OK
B.7.1.2. Are procedures for technical review of the CPA inclusion part of the management system? (EB70, Annex 5,)	/PoA-DD/ /POAR/ /	<p><i>Description:</i></p> <p>The technical review of inclusion of a CPA was clearly defined in PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and EB70 Annex 5 were checked by the validation team.</p> <p><i>Conclusion:</i></p> <p>The procedure for technical review of the CPA inclusion is appropriately involved as part of the management system.</p>	OK	OK
B.7.1.3. Do the arrangements include a system/procedure to avoid double accounting, e.g., to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another	/PoA-DD/ /POAR/ /	<p><i>Description:</i></p> <p>The system wasn't appropriately established.</p> <p><i>Validator's action:</i></p> <p>By means of onsite investigation and interview with the owner of</p>	CL PoA- G1	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
PoA? (EB70, Annex 5)		livestock farm and CME. <i>Conclusion:</i> CL-PoA C1 regarding to the avoiding of double accounting was raised.		
B.7.1.4. Does the management system include a records and documentation control process for each CPA under the PoA? (EB70, Annex 5)	/PoA-DD/ /POAR /	<i>Description:</i> A record keeping system including the data collection and data base management were properly established. <i>Validator's action:</i> By means of onsite investigation and interview with the owner of livestock farm and CME <i>Conclusion:</i> The records and documentation control process for CPA was involved in the management system.	OK	OK
B.7.1.5. Do the arrangements include measures for continuous improvement of the PoA management system? (EB70, Annex5)	/PoA-DD/ /POAR /	<i>Description:</i> The arrangements for Improvement of the PoA management system were involved in the management system. <i>Validator's action:</i> The PoA-DD and EB70 Annex 5 were reviewed. <i>Conclusion:</i> The checkpoint is fulfilled.	OK	OK
B.7.1.6. Are all other relevant elements to ensure the CME's competency to check the features of potential CPAs and ensure that	/PoA-DD/ /POAR	<i>Description:</i> The relevant EC for inclusion of a CPA including ODA, debundle, technical, green filed, crediting period were clearly addressed in B.2	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA taken into account?	/	of PoA-DD. <i>Validator's action:</i> The PoA-DD and EB70 Annex 5 were reviewed. <i>Conclusion:</i> It is concluded that the relevant elements for EC of inclusion of a CPA including the debundling, technical related issue, crediting period were appropriately addressed.		
B.7.2. Monitoring Plan				
<p>B.7.2.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan?</p> <p>(VVS, v. 3.0, §§ 72 (e), 131, 132 (a) (i))</p> <p><i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.</i></p> <p><i>Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with the applied methodology.</i></p> <p><i>In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i></p>	/PoA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>The PoA-DD, emission reduction calculation approach and the applied methodology have been checked.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD was checked against the methodology AMS-III.D.</p> <p><i>Conclusion:</i></p> <p>CL CPA-B3 has been raised.</p>	CL CPA-B3	OK
<p>B.7.2.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible within the PoA design?</p> <p>(VVS, v. 3.0, §§ 132 (b) (i), 133(b))</p>	/PoA-DD/ /AMS-III.D/	<p><i>Description:</i></p> <p>The means of monitoring of all the parameters contained in the monitoring plan are feasible with the PoA design.</p> <p><i>Validator's action:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.																																																
<i>Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design.</i>		All the monitoring parameters were checked against the methodology. <i>Conclusion:</i> The means of monitoring parameters contained in the monitoring plan are feasible and in accordance with the requirements of the applied methodology.																																																		
B.7.2.3. The Monitoring Parameters (VVS, v. 3.0, § 132(a)– (ii)) <i>Indicate whether the provided information for the monitoring parameter complies with the approved methodology including applicable tool(s) in the aspects listed.</i> <i>For checking the use of international standards in the nomenclature, consider:</i> a) <i>Standard format (e.g. 1,000 representing one thousand and 1.0 representing one).</i> b) <i>Values shall be directly given in SI units – or additionally to original units transferred to SI.</i> c) <i>Short scale naming system: (Only) million = 10⁶ and billion 10⁹ shall be used.</i>	/PoA-DD/ /AMS-III.D/	<table><tr><th>Requirement</th><th>OK</th><th>Not OK</th><th>N/A</th></tr><tr><td>Label</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Data Unit</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Description</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Source of data</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Measurement equipment / measure method</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Monitoring frequency</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>QA/QC procedures</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Purpose of data</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Standard format</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>SI units</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>Short scale naming</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>	Requirement	OK	Not OK	N/A	Label	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Data Unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Source of data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Measurement equipment / measure method	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Monitoring frequency	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	QA/QC procedures	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Purpose of data	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard format	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SI units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Short scale naming	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CL-CPA-B3	OK
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B.7.2.4. Has a monitoring plan for all types of CPA	/PoA-	<i>Description:</i>	OK	OK																																																

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>been developed in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor?</p> <p>(VVS, v. 3.0, § 198)</p>	<p>DD/ /CPA-DD/ /AMS-III.D/</p>	<p>The utilization manner of biogas contains power generation, thermal energy generation for heat supply or household. However, the emission reduction from the type I won't be claimed by CME. Only the emission reduction from type III recovery methane is claimed by CME. The monitoring plan developed is applicable to the potential CPA within the PoA.</p> <p><i>Validator's action:</i></p> <p>By means of DD and methodology checking.</p> <p><i>Conclusion:</i></p> <p>A monitoring plan for all the CPA has been developed in accordance with the methodology. The monitoring parameters the CPA has to monitor were identified.</p>		
<p>B.7.2.5. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?</p> <p>(VVS, v. 3.0, § 131)</p> <p><i>Check whether all necessary equations have been provided in the POA-DD/CPA-DD. Pl. consider that ex-post and ex-ante calculations might be different.</i></p> <p><i>Please consider that additional equations might be necessary to calculate auxiliary parameters.</i></p>	<p>/PoA-DD/ /CPA-DD/ /AMS-III.D/</p>	<p><i>Description:</i></p> <p>In sections B.6.1 and B.6.3 the equations necessary for the ex-post emission reduction calculation are described. All kind of emissions have been considered.</p> <p><i>Validator's action:</i></p> <p>The equations were checked against the methodology and related tools.</p> <p><i>Conclusion:</i></p> <p>All equations necessary for the ex-post emission reduction calculation have been described clearly.</p>	OK	OK
<p>B.7.2.6. Is it likely that the monitoring arrangements described in the POA-DD/CPA-DD can</p>	<p>/PoA-DD/</p>	<p><i>Description:</i></p> <p>The monitoring organization, the data collection and management, is</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
properly be implemented in the context of the project activity? (VVS, v. 3.0, § 132(b) (i)) <i>Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.</i>	/CPA-DD/ /AMS-III.D/	clearly described. <i>Validator's action:</i> The monitoring arrangement was checked through the on-site investigation against the CPA-DD. <i>Conclusion:</i> The monitoring arrangements are likely to be implemented properly in context of the project activity under CPA within PoA.		
B.7.2.7. Are the QA/QC procedures appropriate and sufficient to ensure the emission reductions achieved from the programme activity can be reported ex-post and verified? (VVS, v. 3.0, § 132(b) (ii)) <i>Please consider the description given in the relevant section of the PoA-DD and the CPA-DD. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.</i>	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<i>Description:</i> The QA/QC procedures have been checked. <i>Validator's action:</i> By means of on-site investigation and interviewing with the project owner. <i>Conclusion:</i> CL CPA-B3 has been raised.	CL-CPA-B3	OK
B.7.2.8. Are procedures identified for data management? (VVS, v. 3.0, § 132(b) (ii)) <i>Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation</i>	/PoA-DD/ /CPA-DD/ /AMS-III.D/	<i>Description:</i> A transparent monitoring method is employed in CPAs. <i>Validator's action:</i> By PoA-DD and CPA-DD review and onsite interview. <i>Conclusion:</i> All CPAs under shall be verified as long as they fulfil the eligibility	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.</i>		criteria. In PoA-DD sectionB.7.2, there is provision regarding archive data for the crediting period + 2 years.		
C. Duration and Crediting Period <i>It is assessed whether the temporary boundaries of the programme are clearly defined.</i>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
C.1.1. Is the starting date of any CPA prior to the commencement of the validation of the PoA (date of publication for GSCP)? (VVS, v. 3.0, § 193)	/GCC/ /PoA-DD/ /CPA-DD/ /unfccc/ /	<p><i>Description:</i></p> <p>As per eligible criteria, only the CPA, which started after the commencement of the validation of the PoA will be qualified and included.</p> <p><i>Validator's action:</i></p> <p>The eligible criteria has been confirmed in this regards, furthermore the starting date of 1st real case has been assessed. The earliest date among the implementation or construction or real action of a CPA begins has been chosen.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the starting date of the CPA will after commencement of the validation of the PoA (date of publication for GSCP).</p>	OK	OK
C.1.2. Is the project's operational lifetime clearly defined and evidenced? <i>Check whether the project lifetime is correctly defined. Consider the latest "Guidance on the assessment of investment analysis".</i> <i>Check in case of phased implementation this has been reflected throughout the whole PoA-DD incl. the financial assessment, if applicable.</i>		<p><i>Description:</i></p> <p>It is not applicable to PoA.</p> <p><i>Validator's action:</i></p> <p><i>Conclusion:-</i></p>	N/A	N/A
C.1.3. Is the start of the crediting period clearly defined and reasonable? <i>Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed</i>	/PoA-DD/	<p><i>Description:</i></p> <p>The start of the crediting period was defined as 2013-02-01, which is deemed realistic for validation and registration</p> <p><i>Validator's action:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p><i>for validation and registration.</i></p> <p><i>The crediting period of the PoA should be renewed every seven years (every 20 years for A/R PoA) from the start date of the lifetime of the PoA.</i></p> <p><i>Life time of the PoA starts on the date specified in the PoA-DD section B.1 or on the date of registration, whichever is later.</i></p> <p><i>In case of small-scale PoA, the start date must be stated as at least 4 weeks after the estimated submission date;</i></p> <p><i>In case of large-scale PoA, the start date must be stated as at least 8 weeks after the estimated submission date.</i></p> <p><i>(PoA registration uploading requirements step 4)</i></p>		<p>The unfccc website and the PoA-DD were checked.</p> <p><i>Conclusion:</i>the start date is stated as at least 4 weeks after the estimated submission date.</p>		
<p>C.1.4. Does the crediting period of the PoA or an individual CPA not exceed 28 years?</p> <p>(VVS, v. 3.0, § 197)</p>	<p>/PoA-DD/ /CPA-DD/ /unfccc /</p>	<p><i>Description:</i></p> <p>According to the paragraph 6(h) in <i>Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities</i> (version 04.1, EB 55 Annex 38): length of the crediting period for PoA not exceeding 28 years (60 years for A/R). The duration time indicated in PoA-DD of 28 is inline with the procedure.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and EB55 Annex 38 were reviewed.</p> <p><i>Conclusion:</i></p> <p>The duration time for PoA of 28 years is clearly defined in PoA-DD.</p>	OK	OK
D. Environmental Impacts				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.</i>				
<p>D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA) on PoA and/or typical CPA level?</p> <p>(VVS, v. 3.0, §§ 134-135, 199)</p> <p><i>Check the host party regulations regarding EIA. If no requirements for an EIA exist, discuss whether the project participants conducted an analysis for the environmental impacts of the project activity.</i></p>	<p>/CPA-DD/ /PoA-DD/ /CPA-EIA/ /IM01/ /IM02/</p>	<p><i>Description:</i></p> <p>The EIA is requested on CPA level as it is stipulated by the host party according to Law of the People's Republic of China on Appraising of Environment Impacts adopted at the 30th meeting of the Standing Committee of the 9th National People's Congress on 2002-10-28.</p> <p><i>Validator's action:</i></p> <p>By means of internet searching.</p> <p><i>Conclusion:</i></p> <p>Sufficient documents to substantiate that the demonstration of EIA on CPA level have been provided.</p>	OK	OK
<p>D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved in accordance with the host Party procedures?</p> <p>(VVS, v. 3.0, §§ 135, 199)</p> <p><i>Check the EIA and its approval, if applicable. If the EIA is conducted at CPA level, please assess if the EIA was conducted according to the description in the CPA-DD and the PoA-DD.</i></p>	<p>/CPA-DD/ /PoA-DD/ /EIA/ /IM01/ /IM02/</p>	<p><i>Description:</i> the EIA for 1st real case and its approval have been checked and fulfilled the host country regulations.</p> <p><i>Justification of evidence:</i> PoA DD, 1st real case EIA and its approval have been checked by DOE.</p> <p><i>Conclusion:</i> This checkpoint is fulfilled.</p>	OK	OK
<p>D.1.3. Has it been clearly indicated on which level i.e. PoA level or CPA level, an environmental</p>	<p>/CPA-DD/</p>	<p><i>Description:</i></p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
analysis has been carried out or will be carried out? (VVS, v. 3.0, § 200) <i>Please check whether the indication is in line with the provided documentation.</i>	/PoA-DD/ /CPA-EIA/ /IM01/ /IM02/	It is clearly indicated in PoA-DD that the EIA is conducted based on the CPA level. <i>Validator's action:</i> The PoA-DD was reviewed. <i>Conclusion:</i> The EIA is conducted on project activity level involved in each CPA within PoA.		
D.1.4. Does the PoA-DD contain a sufficiently described justification on the choice of level at which the EIA is undertaken?	/CPA-DD/ /PoA-DD/ /CPA-EIA/ /IM01/ /IM02/	<i>Description:</i> It is clearly indicated in PoA-DD that the EIA is conducted based on the SSC-CPA level. <i>Validator's action:</i> The PoA-DD was reviewed. <i>Conclusion:</i> The EIA is conducted on project activity level involved in each CPA within PoA.	OK	OK
D.1.5. Are transboundary environmental impacts considered in the analysis? (VVS, v. 3.0, § 134) <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i>	/PoA-DD/ /CPA-DD/ /IM02/	<i>Description:</i> No negative transboundary environmental impacts are expected, thus not included in the analysis. <i>Validator's action:</i> The related information as per PoA-DD have been crosscheck during onsite investigation and interviews with local experts and stakeholders. <i>Conclusion:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		No negative transboundary environmental impacts have been identified for the project.		
E. Stakeholder Comments <i>The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i>				
E.1.1. With regard to the PoA, how have relevant local stakeholders' comments been invited to consultation prior to the publication of the POA-DD/CPA-DD? (VVS, v. 3.0, §§ 138-140, 201, 202) <i>If such comments are to be sought at the CPA level this shall be described and reflected in the POA-DD and the CPA-DD.</i> <i>Check by means of document review and interviews with local stakeholders if and when a local stakeholder consultation process has been carried out.</i>	/PoA-DD/ /IM01/ /IM02/ /SHCP / /unfccc /	Description: A stakeholder consultation was conducted during March and April 2011 which is before the publication of the PoA-DD. Validator's action: This has been confirmed during interview and by checking the records of stakeholder consultation records. Conclusion: Relevant local stakeholders have been invited to consultation prior to the publication of the PoA-DD.	OK	OK
E.1.2. How have the comments received been compiled and can the summary be assessed as complete and adequate? (VVS, v. 3.0, §§ 201, 202)	/PoA-DD/ /IM01/ /IM02/ /IM04/	Description: The comments received from the stakeholders were considered by CME and the mitigation measures will be designed in the consequent CPAs. Validator's action: By means of interview with the CME.	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
	/SHCP / /unfccc /	<i>Conclusion:</i> No negative comments were received during the stakeholder consultation process.		
<p>E.1.3. With regard to the PoA, can the local stakeholder consultation process be assessed as adequate?</p> <p>(VVS, v. 3.0, §§ 138-140, 201)</p> <p><i>Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.</i></p> <p><i>Please consider the following requirements in this context:</i></p> <p><i>(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;</i></p> <p><i>(b) The summary of the comments received as provided in the PoA-DD/CPA-DD is complete;</i></p> <p><i>(c) The project participants have taken due account of any comments received and have described this process in the PoA-DD/CPA-DD.</i></p>	<p>/PoA-DD/ /IM01/ /IM02/</p>	<p><i>Description:</i> 90 questionnaires have been distributed to local people with different gender, occupation and education.</p> <p><i>Validator's action:</i> An appropriate summary is provided in the PoA-DD. During interview with the local officials and the residents, they expressed their appreciation about the implementation of the project as it leads to employment opportunities and a better air quality.</p> <p><i>Conclusion:</i> The stakeholder consultation process was assessed as adequate.</p>	OK	OK
F. Others				
F.1. Definition of Roles				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<p>F.1.1. Does the section A.3 of the POA-DD include an identification of the coordinating/ managing entity (a private or public entity), Host Party(ies) and PoA participants?</p> <p><i>Project participants may or may not be involved in one of the CPAs related to the PoA. The operators of individual CPAs are not required to be project participants. CDM programme participation is only recorded at the PoA level.</i></p>	/PoA-DD/ /HCA/	<p><i>Description:</i></p> <p>The CME, Lanzhou Hualong Poultry Breeding Co. was clearly indicated in A.3 of PoA-DD, which is assessed to be consistent with the authorization of Host Country Approval from NDRC. The PP from Annex I country UK was also clearly indicated in PoA-DD.</p> <p><i>Validator's action:</i></p> <p>The PoA-DD and HCA were reviewed.</p> <p><i>Conclusion:</i></p> <p>The CME and PP from Annex I country UK have been clearly addressed in PoA-DD.</p>	OK	OK
<p>F.1.2. Is there any Party directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD and is the information provided internally consistent with section A.3 of the PoA-DD?</p>	/LOA/ /PoA-DD/ /CPA-DD/	<p><i>Description:</i></p> <p>The responsible person and contact details of the entity responsible for operation of the CPA has been included in Annex 1 of the PoA-DD.</p> <p><i>Validator's action:</i></p> <p>By means of generic CDM-CPA-DD, Annex 1 and onsite interviews</p> <p><i>Conclusion:</i></p> <p>No issues were raised.</p>	OK	OK
<p>F.2. Approval - Contribution to Sustainable Development</p> <p><i>The written approval of the parties involved is a mandatory requirement.</i></p>				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
F.2.1. Have written approvals of all parties involved (incl. the CME) been provided to the validation team? (VVS, v. 3.0, § 38) <i>Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.</i> <i>Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA</i>	/HCA/ /PoA-DD/	<i>Description:</i> The HCA from China DNA, National Development and Reform Commission of People's Republic of China and LOA from UK were issued on 2012-02-22 and 2012-04-02 respectively. The original copy was provided by the project participants. <i>Validator's action:</i> The scanned copy of HCA and LOA were provided by PP. The authenticity was confirmed by means of checking the China DNA website: http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2849.pdf <i>Conclusion:</i> The HCA from China DNA and LOA from UK have been provided to the validation team.	OK	OK
F.2.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website? (VVS, v. 3.0, §§ 41) <i>Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.</i>	/unfccc/ / /HCA/ /LOA/	<i>Description:</i> LOAs from National Development and Reform Commission (China DNA) and Environment Agency (UK DNA) were issued on 2012-02-22 and 2012-04-02 respectively. The information of DNAs can be checked as per UNFCCC webpage. <i>Validator's action:</i> UNFCCC website has been checked to confirm the China DNA and UK DNA. Refer to: http://cdm.unfccc.int/DNA/index.html <i>Conclusion:</i> NDRC and Environment Agency are serving as DNA of China and UK respectively this could be confirmed by means of checking the homepage of UNFCCC website.	OK	OK
F.2.3. Do the written approvals confirm that	/HCA/	<i>Description:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
the corresponding party is a Party to the Kyoto Protocol? (VVS, v. 3.0, § 39(a))	/LOA/ /CDM M&P/	The LOAs confirm that China and UK ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change on 2002-08-30 and 2002-05-31 respectively and is a party to the Kyoto Protocol. <i>Validator's action:</i> The authenticity of the HCA and LOA has been checked and is assessed as reliable. <i>Conclusion:</i>		
F.2.4. Do the written approvals confirm that the participation is voluntary? (VVS, v. 3.0, § 39(b))	/HCA/ /LOA/	<i>Description:</i> The LOAs confirms the voluntary participation of the PPs. <i>Validator's action:</i> The authenticity of the HCA and LOA has been checked and is assessed as reliable. <i>Conclusion:</i> The voluntary participation is clearly addressed in HCA of China and LOA of UK.	OK	OK
F.2.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country? (VVS, v. 3.0, § 39(c))	/HCA/	<i>Description:</i> The Chinese DNA confirms in the HCA that the proposed project support China is achieving sustainable development. <i>Validator's action:</i> The authenticity of the HCA has been checked and is assessed as reliable. <i>Conclusion:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		The support of the project for sustainable development is confirmed in the HCA of China.		
F.2.6. Do the written approvals refer to the precise project title in the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number? (VVS, v. 3.0, §§ 39(d))	/HCA/ /LOA/ /PoA-DD/	<p><i>Description:</i></p> <p>The LOAs refers to the precise PoA title in the final PoA-DD, Animal Manure Treatment Programme in Gansu Province. The DOE could confirm the consistency of the project title.</p> <p><i>Validator's action:</i></p> <p>The relevant documents like PDD and HCA has been checked to verify that they are consistent in terms of the project title.</p> <p><i>Conclusion:</i></p> <p>No inconsistencies have been observed. The HCA, PDD refer to the precise project title.</p>	OK	OK
F.2.7. Are the written approvals unconditional with regard to F.1.3 to F.1.6? (VVS, v. 3.0, § 40)	/HCA/ /LOA/	<p><i>Description:</i></p> <p>The HCA has been checked to confirm whether this requirement is met.</p> <p><i>Validator's action:</i></p> <p>The authenticity of the HCA has been checked and is assessed as reliable.</p> <p><i>Conclusion:</i></p> <p>It is confirmed that the HCA issued by Chinese DNA is unconditional with regard to F.2.3 to F.2.6.</p>	OK	OK
F.2.8. Is the information regarding the project participants listed in tabular form in the PoA-DD and is internally consistent with the information	/LOA/ /HCA/	<p><i>Description:</i></p> <p>The section A.3 and Annex 1 of PDD have been checked.</p>		

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
provided in the section that contains the contact information of the project participants? (VVS, v. 3.0, § 46)	/PoA-DD/	<i>Validator's action:</i> The DD -GSP has been finally checked. <i>Conclusion:</i> It is confirmed that section A3 and Annex I are internally consistent with regard to the project participants' names.		
F.2.9. Are all project participants listed in the PoA-DD approved at least by one Party involved? (VVS, v. 3.0, § 45) <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i> <i>Describe the means of validation employed to draw this conclusion.</i>	/LOA/ /HCA/ /PoA-DD/	<i>Description:</i> Lanzhou Hualong Poultry Breeding Co..is defined as Coordinating/Managing Entity (CME) from China. A&T Carbon Asset Co., Limited. is defined as PP from UK. The LOAs have been checked by the validation team to confirm that the same entity is approved by the party involved. No deviations have been observed. The final PoA-DD and LOAs are consistent. <i>Validator's action:</i> The authenticity of the HCA has been checked and is assessed as reliable <i>Conclusion:</i> The DNA of China has approved Lanzhou Hualong Poultry Breeding Co. as CME. A&T Carbon Asset Co., Limited. is defined as PP from UK.	OK	OK
F.2.10. Are any other project participants than those authorized as project participants listed in the PoA-DD? (VVS, v. 3.0, § 47)		<i>Description:</i> The HCA unambiguously defined Lanzhou Hualong Poultry Breeding Co.. as CME from China. The LOA unambiguously defined A&T Carbon Asset Co., Limited as PP from Annex I country UK. <i>Validator's action:</i>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		<p>The HCA has been checked and compared to the PoA-DD. Furthermore interview has been conducted to confirm the project participants.</p> <p><i>Conclusion:</i></p> <p>It could not be observed that project participants are approved but not included in the PoA-DD.</p>		
<p>F.3. Modalities of Communication Statement</p> <p><i>A due diligence on the Modalities of Communication statement in accordance with the requirements established in the VVS is mandatory.</i></p>				
<p>F.3.1. Has a valid Modalities of Communication (MoC) been provided to the validation team from a project participant with whom the DOE has a contractual relationship? (VVS, v. 03, § 55)</p> <p><i>Indicate whether a MoC has been received, with a clear reference to the contractual relationship of the project participant with the DOE.</i></p>	<p>/VC/ /MoC/</p>	<p><i>Description:</i></p> <p>The MoC was provided to the validation team by A&T Carbon Asset Co., Limited, with whom the DOE has a contractual relationship.</p> <p><i>Validator's action:</i></p> <p>The validation contract was checked by the validation team.</p> <p><i>Conclusion:</i></p> <p>MoC was provided by PP, A&T Carbon Asset Co., Limited. TÜV Nord has a direct contractual relationship with the buyer.</p>	OK	OK
<p>F.3.2. Has the MoC been signed by a duly authorized person on behalf of the respective project participant? (VVS, v. 3.0, §§ 54, 56)</p> <p><i>Please Indicate how the personal and corporate identities of</i></p>	<p>/MoC/ /HCA/ /LOA/</p>	<p>The personal and corporate identities of all project participants and focal points included in the MoC were validated by:</p> <p><input checked="" type="checkbox"/> Directly checking evidence for corporate and personal entity</p> <p><input type="checkbox"/> Notarized documentation</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>all project participants and focal points included in the MoC statement have been validated,:</i>		<input type="checkbox"/> Written confirmation from the project participant that all corporate and personal details are accurate and valid. , including specimen signatures and employment status of their signaries whether a letter of approval has been received, with a clear reference to the supporting documentation		
F.3.3. Has the MoC statement correctly been completed? (VVS, v. 3.0, §§ 59, 60)	/MoC/	<input checked="" type="checkbox"/> The latest version of the form (F-CDM-MOC) has been used <input checked="" type="checkbox"/> Annex 1 of the MoC is correctly completed <input checked="" type="checkbox"/> The project participants' authorized signatories signing the MoC are also listed in Annex 1 of the MoC.	OK	OK
F.3.4. Does the MOC confirm that the Coordinating/managing entity of the PoA communicates with the Board, and is the information in the MoC on all Project participants consistent with the PoA-DD? <i>Procedures for modalities of communication between project participants and the Executive Board. shall apply, with the exception that the coordinating/managing entity shall be either sole or joint focal point for each area of communication. The limit of joint focal points for the programme shall be 5, or equal to the number of host Parties if greater than 5.</i>	/MoC/ /PoA-DD/	<i>Description:</i> The CME and A&T Carbon Asset Co., Limited are nominated as joint focal point for the communication area. The information on MoC of the two PPs is consistent with that in Annex 1 of PoA-DD. <i>Validator's action:</i> The MoC and the PoA-DD were checked by the validation team. <i>Conclusion:</i> The CME,Lanzhou Hualong Poultry Breeding Co. and A&T Carbon Asset Co., Limited are nominated as joint focal point and the information on MoC of the two PPs is consistent with PoA-DD.	OK	OK
F.4. Project documentation editorial aspects				

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
<i>The POA-DD and the CPA-DD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.</i>				
F.4.1. Have the latest versions of the PoA-DD and the CPA-DD form been applied? (VVS, v. 3.0, § 62)	/PoA-T/	<p>Description:</p> <p>The latest SSC-PoA-DD form (ver. 02.0, EB67/Annex 30) and SSC-CPA-DD form (Ver. 02.0, EB66/Annex 17) have been applied.</p> <p>Validator's action:</p> <p>The PoA-DD and CPA-DD were cross-checked with the PDD template.</p> <p>Conclusion:</p> <p>The latest version of PoA-DD and CPA-DD were applied for 2nd GSP.</p>	OK	OK
F.4.2. Have the PoA-DD and the generic CPA-DD been duly filled in accordance with the latest guidance(s)? (VVS, v. 3.0, § 63)	/POAR /	<p>Description:</p> <p>the latest version of <i>Guidelines for completing the component project design document form for small-scale component project activities</i> (ver. 01.0, EB66/Annex 17) and <i>Guidelines for completing the programme design document form for small-scale CDM programmes of activities</i> (ver. 02.0, EB67/ Annex 30) are applied when completing the DDs</p> <p>Validator's action:</p> <p>The PoA-DD and CPA-DD were cross-checked with the PDD template.</p> <p>Conclusion:</p> <p>The latest version of guidelines for completing PoA-DD and CPA-DD</p>	OK	OK

Checklist Item (incl. guidance for the validation team)	Reference	Validation Team Comments (justification and substantiation of information, data and evidences)	Draft Concl.	Final Concl.
		were applied for 2 nd GSP.		

ANNEX 2: ASSESSMENT OF APPLICABILITY CRITERIA

Table A-2: Assessment of Applicability Criteria (VVS, v. 3.0 §§ 70 – 76)

Applicability Criteria	Evidence used	met	not met	N/A	Assessment of validation team (results and means of assessment)
1. This methodology covers project activities involving the replacement or modification of anaerobic animal manure management systems in livestock farms to achieve methane recovery and destruction by flaring/combustion or gainful use of the recovered methane. It also covers treatment of manure collected from several farms in a centralized plant	• FSR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against the FSR.

<p>2. The livestock population in the farms included in each CPA under the PoA should be managed under confined conditions;</p>	<ul style="list-style-type: none"> • On-site photo or • FSR or FSR approval • EIA or EIA approval • History Record of livestock farms • Statement by Related Agriculture Bureau 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>This criterion will be cross checked against the statement of relevant authority, on-site photo, the FSR and the EIA.</p>
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3. Manure or the streams obtained after treatment are not discharged into natural water resources	<ul style="list-style-type: none">• FSR; or• EIA or EIA approval• History Record of livestock farms• Statement by Related Agriculture Bureau• Technical demonstration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against the statement of relevant authority, the FSR and the technical specification.
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4. The annual average temperature of baseline site where anaerobic manure treatment facility is located is higher than 5°C;	<ul style="list-style-type: none">• Official data at the nearest meteorological station, or• Data available from historical on site observations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against official local available meteorological records.
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5. In the baseline scenario the retention time of manure waste in the anaerobic treatment system should be greater than one month;	<ul style="list-style-type: none">• FSR or EIA or EIA approval• Technical drawing• Proof from local government; or• Other evidence , e.g. onsite survey.• Operation log	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This information will be cross checked against on-site observation and local government documents.
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<p>6. The baseline scenario for the manure treatment is that the manure waste from the livestock would be treated in anaerobic lagoons with the depth of at least 1m;</p>	<ul style="list-style-type: none"> • FSR or EIA or EIA approval • Technical drawing or construction drawing of lagoon • Proof from local government; or • Other evidence, e.g. onsite survey. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>This criterion will be cross checked against the FSR, EIA, technical drawings and farm records.</p>
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7. No methane recovery and destruction by flaring, combustion or gainful use takes place in the baseline scenario;	<ul style="list-style-type: none"> • FSR or • -EIA • Technical drawing • photo; or • proof from local government; or • onsite survey. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against on-site observation, on-site survey and local government documents.
8. The residual waste from the animal manure management system must be handled aerobically, e.g. land application;	<ul style="list-style-type: none"> • FSR; • EIA; • Technical drawing and records • Proof from local government • onsite survey. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against on-site observation, on-site survey and local government documents.

9. Only animal manure will be anaerobically treated but no other organic matters are involved in the CPA;	<ul style="list-style-type: none"> • FSR; or • EIA • Operation records; • Technical demonstration 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against the FSR, EIA, technical farm documents
10. Technical measures will be used to ensure that all biogas produced by the digester is used or flared;	<ul style="list-style-type: none"> • FSR or • EIA • Technical drawing • Biogas storage tank; and flaring system; 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against the FSR, EIA, farm technical drawings and records of flaring operation.
11. The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester.	<ul style="list-style-type: none"> • FSR; • Operation records or • Technical flow demonstration 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against the FSR and the technical farm operation records.

12. The emission reductions from type III components of the CPA should be less than or equal to 60,000tCO ₂ /yr.	CPA lists ER Calculation worksheet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will checked against the ER sheet available for each CPA during validation stage
13. The baseline scenarios of type III is animal manure would be left to decay anaerobically without methane recovery and destruction	<ul style="list-style-type: none"> • Technical drawing and records • Proof from local government • onsite survey 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	This criterion will be cross checked against the onsite survey, technical farm documents and local government documents.

ANNEX 3: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-3: Assessment of Baseline Identification (VVS, v. 2.0 §§88 – 95)

<input checked="" type="checkbox"/>	Baseline is pre-defined by the methodology
<input type="checkbox"/>	Assessment of baseline see below

Baseline Alternatives identified	In line with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)

ANNEX 4: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-4: Assessment of Financial Parameters(VVS, v. 2.0, §§ 120, 121 / in case financial parameters stem from FSR §122,)

<input type="checkbox"/>	No financial parameters are used for additionality justification
<input checked="" type="checkbox"/>	Assessment of all financial parameters see below

PP Demonstration					DOE Assessment		
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	values applied are correct	Evidence used are appropriate	Comment
Benchmark for project	7% (before tax)	-	Economic Evaluation Method and Parameter of Construction Projects (3rd edition) for the stock farming (NFES)	NFES	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Project IRR of 7% was applied, the IRR benchmark is chosen according to Economic Evaluation Method and Parameter of Construction Projects (3rd edition) for the stock farming

ANNEX 5: ASSESSMENT OF BARRIER ANALYSIS

Table A-5: Assessment of Barrier Analysis (VVS, v. 2.0, §§124-127)

<input checked="" type="checkbox"/>	No barrier parameters are used for additionality justification
<input type="checkbox"/>	As per additionality justification at CPA level
<input type="checkbox"/>	Assessment of barriers see below

Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result

ANNEX 6: OUTCOME OF THE GSCP

Table A-6: Outcome of the Global Stakeholder Consultation Process

(VVS Version 2.0, §§ 34- 37)

<input checked="" type="checkbox"/>	No comments were received during the global stakeholder consultation period
<input type="checkbox"/>	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:

Comment No.:	Comment by:	Inserted on:	Subject	Comment *)	Action taken by the validation team to take due account on the comment*)	Conclusion (incl. CARs CLs or FARs)
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*)In case clarifications have been requested by the validation team corresponding rows shall be added

ANNEX 7: ELIGIBILITY CRITERIA ASSESSMENT

Table A-7: Assessment on Eligibility Criteria for inclusion of CPAs under this PoA

A full list shall be included in section B.2 of the PoA-DD and B.5 of the generic CPA-DD.

PP Demonstration	DOE Assessment
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No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
1	Geographical boundary	1. All the project activities under the CPA should be located in the boundary of the PoA, i.e. within Gansu Province;	<ul style="list-style-type: none"> Gansu Province administrative map Project coordination 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (a) EB70 Annex 5. .</p> <ul style="list-style-type: none"> The expected verification statement on all livestock farm and/or manure treatment system under the real case CPA will be issued by management authorities. DOE onsite inspection is used to cross-check the location of a CPA. <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
2	To avoid double counting	2. All the project activities under the CPA should pass the procedure of avoiding double counting described in section C (ii) of PoA-DD;	<ul style="list-style-type: none"> conduct the avoiding double counting procedure as per section C of PoA-DD. 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (b) EB70 Annex 5.</p> <ul style="list-style-type: none"> The database established and controlled by the CME will be checked. In the database, each farm has its unique registration information. The UNFCCC website will be cross-checked. Furthermore each project owner will sign a contract with the CME which confirms that the project owner is aware of and has agreed that their activity is being subscribed to the PoA and that their project have neither already been registered as a CDM project, nor as a CPA of another PoA. <p>The expected evidence is deemed sufficient to</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
					demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.
3	The specifications of technology/measure	<p>3. All the project activities under the CPA are to install anaerobic animal manure management systems to achieve methane recovery and destruction by flaring/combustion or gainful use of the recovered biogas. It also covers treatment of manure collected from several farms in a centralized plant.</p> <p>In addition, biogas holder will be installed in each project activity to achieve that in the normal case all methane produced from anaerobic digestion can be stored and stabilized, and then be totally used to generate electricity and/or thermal. Besides, flaring system will also be installed in project activities to ensure that in case of emergency all biogas produced by the digester is flared but not emitted to atmosphere and in this case, open flaring or closed flaring will be adopted based on each owner's opinion.</p>	<ul style="list-style-type: none"> • Project technical diagram • Project feasibility study 	<input checked="" type="checkbox"/>	<p>This criterion corresponds with paragraph 16 (c) EB70 Annex 5. The specifications of technology/measure including the level and type of service are clearly stated. The relevant applicability criterion of applied methodology, AMS-III.D, is also met for the certain applicable scenario.</p> <p>The FSR will state the relevant implementation information.</p> <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
4	The start date of the CPA	4. The start date of the project activities under the CPA, which is the earliest date among equipment purchase date, debt contract date and construction start date, are later than the first PoA GSC start date of 14/09/2011.	<ul style="list-style-type: none"> • Equipment purchase contract • Construction contract or construction start record • Debt contract 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(d) EB70 Annex 5. In line with EB 55 Annex 38 §7 (d) the CPA starting date cannot be prior to commencement of validation. The POA-DD has been made publicly available on 2011-09-14.</p> <p>The expected evidence are as follows:</p> <ul style="list-style-type: none"> - Equipment purchase contract of the CPA. - Construction and/or debt contract of the CPA - The start date of the CPA is defined as the earliest commitment to the financial expenditure of the CPA and is later than the 1stPoA GSP start date of 2011-09-14. <p>The expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
5	The applicability and other requirements of applied methodology	5. The livestock population in the farms included in each CPA under the PoA should be managed under confined conditions;	<ul style="list-style-type: none"> • On-site photo or • FSR or FSR approval • EIA or EIA approval • History Record of 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the specifications of technology/measure of AMS-III.D paragraph 1(a).</p> <p>This criterion will be cross checked against the statement of relevant authority, the FSR and the EIA.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
			livestock farms • Statement by Related Agriculture Bureau		Therefore the EC is deemed sufficient and appropriate.
6		6. Manure or the streams obtained after treatment are not discharged into natural water resources	<ul style="list-style-type: none"> • FSR; or • EIA or EIA approval • History Record of livestock farms • Statement by Related Agriculture Bureau • Technical demonstration 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the specifications of technology/measure of AMS-III.D paragraph 1(b).</p> <p>This criterion will be cross checked against the statement of relevant authority, the FSR and the technical specification.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
7		7. The annual average temperature of baseline site where anaerobic manure treatment facility is located is higher than 5°C;	<ul style="list-style-type: none"> • Official data at the nearest meteorological station, or • Data available from historical on site observations 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the specifications of technology/measure of AMS-III.D paragraph 1(c).</p> <p>This criterion will be cross checked against official local available meteorological records.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
					given. Therefore the EC is deemed sufficient and appropriate.
8		8. In the baseline scenario the retention time of manure waste in the anaerobic treatment system should be greater than one month;	<ul style="list-style-type: none"> • FSR or • EIA or EIA approval • Technical drawing • Proof from local government; or • Other evidence, e.g. onsite survey. • Operation log 	<input checked="" type="checkbox"/>	<p>.This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D "<i>In the baseline scenario the retention time of manure waste in the anaerobic treatment system is greater than one month, ...</i>"</p> <p>This information will be cross checked against on-site observation and local government documents.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
9		9. The baseline scenario for the manure treatment is that the manure waste from the livestock would be treated in anaerobic lagoons with the depth of at least 1m;	<ul style="list-style-type: none"> • FSR or • EIA or EIA approval • Technical drawing or construction drawing of lagoon • Proof from local government; or • Other evidence, e.g. onsite survey. 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D "<i>In the baseline scenario the retention time of manure waste in the anaerobic treatment system is greater than one month, and in case of anaerobic lagoons in the baseline, their depths are at least 1 m</i>"</p> <p>This information will be cross checked against the FSR, technical drawings and farm records.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
10		10. No methane recovery and destruction by flaring, combustion or gainful use takes place in the baseline scenario;	<ul style="list-style-type: none"> • FSR or • -EIA • Technical drawing • photo; or • proof from local government; or • onsite survey. 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70Annex 5 and the requisition of AMS-III.D <i>"This information will be cross checked against the FSR No methane recovery and destruction by flaring, combustion or gainful use takes place in the baseline scenario."</i></p> <p>This information will be cross checked against on-site observation and local government documents.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
11		11. The residual waste from the animal manure management system must be handled aerobically, e.g. land application;	<ul style="list-style-type: none"> • FSR; • EIA; • Technical drawing and records • Proof from local government • onsite survey. 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the specifications of technology/measure of AMS-III.D paragraph 2(a).</p> <p>This information will be cross checked against the FSR,.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
12		12. Only animal manure will be anaerobically treated but no other organic matters are involved in the CPA;	<ul style="list-style-type: none"> • FSR; or • EIA • Operation records; • Technical 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 2(a).</p> <p>This information will be cross checked against the FSR, technical farm documents.</p> <p>The compliance with the applicability and other</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
			demonstration		requirements of the methodology applied by the CPA is given. Therefore the EC is deemed sufficient and appropriate.
13		13. Technical measures will be used to ensure that all biogas produced by the digester is used or flared;	<ul style="list-style-type: none"> • FSR or • EIA • Technical drawing • Biogas storage tank; and flaring system; 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex5 and the requisition of AMS-III.D paragraph 2(b). This information will be cross checked against the FSR, EIA, farm technical drawings and records of flaring operation.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
14		14. The storage time of the manure after removal from the animal barns, including transportation, should not exceed 45 days before being fed into the anaerobic digester.	<ul style="list-style-type: none"> • FSR; • Operation records or • Technical flow demonstration 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5and the requisition of AMS-III.D paragraph 2(c). This information will be cross checked against the FSR and the technical farm operation records.</p> <p>The compliance with the applicability and other requirements of the methodology applied by the CPA is given.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
15		15. The emission reductions from type III components of the CPA should be less than or equal to 60,000tCO ₂ /yr.	<p>CPA lists</p> <p>ER Calculation worksheet</p>	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 7.</p> <p>Therefore, the proposed CPA is eligible to apply the SSC methodology as part of the small scale POA.</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
					The ER sheet will be available for each CPA during validation stage. Therefore the EC is deemed sufficient and appropriate.
16		16. The baseline scenarios of type III is animal manure would be left to decay anaerobically without methane recovery and destruction	<ul style="list-style-type: none"> • Technical drawing and records • Proof from local government • onsite survey 	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16(e) EB70 Annex 5 and the requisition of AMS-III.D paragraph 2(a). This information will be cross checked against the onsite survey and technical farm documents. The compliance with the applicability and other requirements of the methodology applied by the CPA is given. Therefore the EC is deemed sufficient and appropriate.
17	Additionality	<p>17. A CPA should meet any one of following criteria for assessing additionality::</p> <p>1) Either meets relevant requirement in “Guidelines for demonstrating additionality of microscale project activities”, including:</p> <p>a) The geographic location of the project activity is in one of the least developed countries or the</p>	<ul style="list-style-type: none"> • evidence regarding undeveloped zone ; • ER Calculation worksheet • equipment brand or equipment purchase contract; • IRR 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(f) EB70 Annex 5.</p> <p>In line with the „Guidelines for demonstrating additionality of microscale project activities“ the CPA is automatically additional if the project activities are located in an underdeveloped zone and the ER of type III do not exceed 20 ktCO_{2e}/ year.</p> <p>An official document proofing the underdeveloped zone in</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
		<p>small island developing States (LDCs/SIDS) or in a special under developed zone (SUZ) of the host country;</p> <p>b) The emission reductions from type III components of the CPA are no more than 20 ktCO₂e per year.</p> <p>2) Or meets relevant requirement for the positive list of technologies and project activity types that are defined as automatically additional in “Guidelines on the demonstration of additionality of small-scale project activities”, including:</p> <p>a) Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises(SMEs);</p>			<p>the host country and the ER-calculation will be provided at CPA validation stage.</p> <p>In line with the „ Guidelines on the demonstration of additionality of small-scale project activities “EB 68 Annex 27 project activity types that are defined as automatically additional are “<i>Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the small-scale CDM thresholds</i>”.</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
		<p>b) The emission reductions from type III components of each units under the CPA is no more than 3,000 tCO_{2e} per year;</p> <p>3) Or the third method:</p> <p>The project IRR (before tax) of the project included in the CPA is lower than the benchmark (project IRR before tax) of 7% according to the <i>Economic Evaluation Method and Parameter of Construction Projects</i> (3rd edition) for the stock farming.;</p>			<p>This means the ER of type III component of each project under CPA do not exceed 3,000 tCO_{2e}/ year.</p> <p>The equipment purchase contract, technical agreement of the equipment and the ER-calculation will be provided at CPA validation stage.</p> <p>In line with the „ Guidelines on the demonstration of additionality of small scale project activities” and the “Tool for the Demonstration and Assessment of Additionality” the project activity is additional if the project IRR is lower than the applicable benchmark of 7%.</p> <p>The host country regulations “Economic Evaluation Method and Parameter of Construction Projects” and “<i>Economic Evaluation Code for Construction of Project</i>” are applicable to the relevant scenario.</p> <p>The equipment purchase contract, technical agreement of the equipment and the IRR-calculation will be provided at CPA validation stage.</p> <p>Thus, the expected evidence is deemed sufficient to demonstrate the fulfilment of this eligibility criterion. Therefore the EC is deemed sufficient and appropriate.</p>
18	Environmental impact analysis	18. Each activity included in the CPA must have obtained approval of EIA.	<ul style="list-style-type: none"> Environmental impact assessment and 	<input checked="" type="checkbox"/>	This criterion corresponds to paragraph 16(g) EB70 Annex 5, to ensure that an environmental analysis is conducted as

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
			its approval.		per host country requirements. An EIA will be provided for each activity within the CPA, as well as the official EIA approval. The expected evidence at CPA inclusion stage is deemed appropriate. Therefore the EC is deemed sufficient and appropriate.
19	Funding from Annex I parties	19. The CPA has no public funding from Annex I Parties;	<ul style="list-style-type: none"> Statement by biogas plant owner. 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(h) EB70 Annex 5. And it is also in line with EB55 Annex 38 §6(n), which says that a diversion of official development assistance is a violation of UNFCCC guidelines.</p> <p>The CME will provide a Statement from the biogas plant owner.</p> <p>The expected evidence at CPA inclusion stage is deemed appropriate.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>
20	Others	20. The CPA crediting period does not exceed the 31/01/2041 (the PoA end date).	<ul style="list-style-type: none"> PoA database; and/or UNFCCC website 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 7(c) EB55 Annex 38. The crediting period must not extend beyond the end date of the Programme of Activities (PoA) to which it belongs.</p> <p>The information will be included in the CPA-DD and checked against the duration of the PoA.</p> <p>The EC is deemed sufficient and appropriate.</p>
20		21. There is no any project activity which satisfied both condition: (a) has the same activity implementer as	<ul style="list-style-type: none"> FSR; Documents from local government; 	<input checked="" type="checkbox"/>	<p>This criterion corresponds to paragraph 16(l) EB70 Annex 5. In line with EB 54 Annex 13, this criterion ensures that the CPA is not a de-bundled component of</p>

PP Demonstration				DOE Assessment	
No.	Eligibility Criteria	Further Elaboration	Minimum Expected Evidence(s) to be provided during CPA inclusion	Appropriate and sufficient	Explanation of final result
		<p>the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same technology/measure, and;</p> <p>(b)The boundary is within 1km of the boundary of the proposed small-scale CPA, at the closest point.</p>	<ul style="list-style-type: none"> Onsite Survey 		<p>a large scale activity.</p> <p>The FSR will provide project details as well as official documents from the government. An on-site survey will be adopted for cross-check.</p> <p>The expected evidence at CPA inclusion stage is deemed appropriate.</p> <p>Therefore the EC is deemed sufficient and appropriate.</p>

ANNEX 8: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL

Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Yongjun Li

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-09-26
VCS	Senior Assessor	2014-09-26

CODE	TECHNICAL AREA
1.2	Renewable Energy
13.1	Waste Handling and Disposal

131 - Rev. 3, Date: 2011-04-12

Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Tao Yan

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-09-26
VCS / ISO 14001	Lead Assessor	2014-09-26

CODE	TECHNICAL AREA
1.2	Renewable Energy
13.1	Waste Handling and Disposal

131 - Rev. 3, Date: 2011-09-20

Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Ulrich Walter

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2014-12-05
ISO 14001	Lead Assessor	2014-12-05
VCS / ISO 14001	Lead Assessor	2014-12-05

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal Energy Generation	
1.2	Renewable Energy	
1.3	Electricity Distribution	
1.4	Heat Distribution	
1.5	Energy Storage	
1.6	Chemical Process Industries	
1.7	Chemical Process Industries	
1.8	Chemical Process Industries	
1.9	Waste Handling and Disposal	13.1.1 Waste Management 13.1.2 Waste Water Management
1.10	Animal Waste Management	
1.11	Animal Waste Management	

149 - Rev. 4, Date: 2012-02-27

Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Stefan Wister

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2014-08-30
VCS	Senior Assessor (Validation, Verification)	2014-08-30

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal Energy Generation	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Biom 1.2.5 Tidal
1.2	Renewable Energy	
1.3	Electricity Distribution	
1.4	Heat Distribution	
1.5	Energy Storage	
1.6	Chemical Process Industries	13.1.1 Waste Management 13.1.2 Waste Water Management
1.7	Chemical Process Industries	
1.8	Chemical Process Industries	
1.9	Waste Handling and Disposal	
1.10	Animal Waste Management	
1.11	Animal Waste Management	

163 - Rev. 2, Date: 2011-08-10

TUV NORD Certification																							
<p align="center">Statement of Competence Agreement and authorization according to the provisions of the TÜV NORD JI/CDM Certification Program</p> <p align="center">Ms. Weiming Ye</p> <table border="1"> <thead> <tr> <th>SCHEME</th> <th>STATUS</th> <th>VALID UNTIL</th> </tr> </thead> <tbody> <tr> <td>CDM</td> <td>Lead Assessor (Validation, Verification)</td> <td>2014-09-19</td> </tr> <tr> <td>VCS</td> <td>Lead Assessor</td> <td>2014-09-19</td> </tr> </tbody> </table> <p>Authorization status for technical areas within national scope:</p> <table border="1"> <thead> <tr> <th>CODE</th> <th>TECHNICAL AREA</th> </tr> </thead> <tbody> <tr> <td>1.2</td> <td>Renewable Energies</td> </tr> <tr> <td>13.1</td> <td>Waste Handling and Disposal</td> </tr> </tbody> </table> <p>089 – Rev. 1, Date: 2011-09-14</p>			SCHEME	STATUS	VALID UNTIL	CDM	Lead Assessor (Validation, Verification)	2014-09-19	VCS	Lead Assessor	2014-09-19	CODE	TECHNICAL AREA	1.2	Renewable Energies	13.1	Waste Handling and Disposal						
SCHEME	STATUS	VALID UNTIL																					
CDM	Lead Assessor (Validation, Verification)	2014-09-19																					
VCS	Lead Assessor	2014-09-19																					
CODE	TECHNICAL AREA																						
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