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# **Validation Report**

AGCERT INTERNATIONAL LIMITED, IRELAND

## **Validation of the AWMS Methane Recovery Project BR06- S -25, Minas Gerais, Brazil**

**Report No. 842811, rev. 1**

**January 8, 2007**

TÜV SÜD Industrie Service GmbH  
Carbon Management Service  
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<b>Contract approved by:</b>		Werner Betzenbichler		
<b>Report Title:</b>		Validation of the AWMS Methane Recovery Project BR06-S-25, Minas Gerais, Brazil		
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Summary:  The Certification Body "Climate and Energy" has been ordered by AgCert International PLC, Ireland (AgCert International) to perform a validation of the above mentioned project.  In summary, it is TÜV SÜD´s opinion that the project "AWMS Methane Recovery Project BR06-S-25, Minas Gerais, Brazil", as described in the revised project design document of December 21, 2006 meets all relevant UNFCCC requirements for the CDM, set by the Kyoto Protocol, the Marrakech Accords and relevant guidance by the CDM Executive Board and that the project furthermore meets all relevant host country criteria and correctly applies the baseline and monitoring methodology Type III, Other Project Activities, Category III.D., Methane Recovery for small-scale projects.  Prior to the submission of this validation report to the CDM Executive Board, TÜV SÜD will have to receive the written approval of the DNA of involved parties, including confirmation by the DNA of Brazil that the project assists in achieving sustainable development.  Hence, TÜV SÜD will recommend the project for registration as CDM project activity by the CDM Executive Board.  Additionally the assessment team reviewed the estimation of the projected emission reductions. TÜV SÜD confirms that the indicated amount of emission reductions of 282,217 tonnes CO <sub>2e</sub> over a crediting period of ten years, resulting in a calculated annual average of 28,222 tonnes CO <sub>2e</sub> represents a reasonable estimation using the assumptions given by the project documents.				
Work carried out by:	Markus Knödseder Johann Thaler	Internal Quality Control by:	Werner Betzenbichler	

## Abbreviations

AgCert Brazil	AgCert Do Brasil Solucoes Ambientais Ltda.
AgCert International	AgCert International PLC, Ireland
AWMS	Animal Waste Management Systems
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
DOE	Designated Operational Entity
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
KP	Kyoto Protocol
MP	Monitoring Plan
SSC	Small Scale Project
PDD	Project Design Document
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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Annex 1: Validation Protocol

Annex 2: Information Reference List

# 1 INTRODUCTION

## 1.1 Objective

AgCert International PLC, Ireland (AgCert International) has commissioned TÜV SÜD Industrie Service GmbH (TÜV SÜD) to validate the AWMS Methane Recovery Project BR06-S-25, Minas Gerais, Brazil. The validation serves as design verification and is a requirement of all CDM projects. The purpose of a validation is to have an independent third party assess of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakech Accords.

## 1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The audit team has been provided with the first PDD-version in June 2006. Based on this documentation a document review and a fact finding mission in form of an on site audit has taken place. The demanded additional information is addressed in annex 1. Requested information was given and the PDD was updated accordingly. That final PDD version 5 was submitted on December 21, 2006 and serves as the basis for the final assessment presented herewith. The changes were not significant as only some information was added and adapted to the final PDD, thus the global stakeholder process was not repeated.

Studying the existing project documentation, it was obvious that the competence and capability of the validation team has to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14000, EMAS)
- Quality assurance
- Agricultural operations especially regarding manure management
- Technical aspects of gas flaring and bio digester operation
- Monitoring concepts
- Political, economical and technical random conditions in host country

According to these requirements TÜV SÜD has assembled a project team in accordance with the appointment rules of the TÜV certification body “climate and energy”:

**Markus Knödlseider** is an auditor for climate change projects and GHG emission inventories at the department “Carbon Management Service” in the head office of TÜV SÜD in Munich. He has been involved in the topic of environmental auditing, baselining, monitoring and verification due to the requirements of the Kyoto Protocol since Oct. 2001. His main focus lies on renewable energies.

**Johann Thaler** graduated as Master of environmental Economy at the University of Augsburg. During his study he got first experiences in environmental management systems. His master thesis was about a fuel switch program in Brazil as a CDM project. Based in Brazil he has been working for TÜV SÜD as a GHG auditor on freelance basis since March 2005.

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body “climate and energy”:

Werner Betzenbichler (Head of Certification Body, GHG lead auditor)

### 1.3 GHG Project Description

This project proposes to apply to multiple swine Confined Animal Feeding Operations (located in Minas Gerais, Brazil) a GHG mitigation methodology which is applicable to intensive livestock operations. The proposed project activities will mitigate AWMS GHG emissions in an economically sustainable manner, and will result in other environmental benefits, such as improved water quality and reduced odor. The project proposes to move the designated farms from a high-GHG AWMS practice; an open air lagoon, to a lower-GHG AWMS practice; an ambient temperature anaerobic digester with the capture and combustion of the resulting biogas. The concluding purpose of this project is to mitigate animal effluent related GHG by improving AWMS practices. In total 3 farms with 4 sites are contracted in the State of Minas Gerais, Brazil.

Project participant is AgCert Do Brasil Solucoes Ambientais Ltda. Host Party of the project activity is Brazil.

The category of the project activity is in Scope 13 - Waste Handling and Disposal, and Scope 10 – Fugitive emissions from fuels (solid, oil and gas). The approved and applied baseline and monitoring methodology is Type III, Other Project Activities, Category III.D Methane Recovery for small scale project activities, version 11. According to the PDD and involved parties the starting date of the project activity is May 09, 2005. The crediting period is committed as a 10 years non renewable crediting period and it starts on 01/04/2007.

## 2 METHODOLOGY

The validation of the project consists of the following three phases:

- Desk review
- Follow-up interviews
- Resolution of clarification and corrective action requests

In order to ensure transparency, a validation protocol was customized for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The validation protocol consists of three tables. The different columns in these tables are described in Figure 1.

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

Validation Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Validation report.	Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent Validation process.

Validation Protocol Table 2: Requirement checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in seven different sections. Each section is then further subdivided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification is used when the validation team has identified a need for further clarification.

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of project owner response	Validation conclusion
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.	This section should summarize the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".

Figure 1 Validation Protocol Tables

## 2.1 Review of Documents

The project design document submitted by the client and additional background documents related to the project design and baseline were reviewed. The audit team has been provided with the first PDD-version issued on June 01, 2006 which had been made public on [www.netinform.de](http://www.netinform.de). The project design document was assessed by some revisions addressing changes to the baseline and monitoring methodology requested by the CDM Executive Board and clarification requests issued by TÜV SÜD. The final updated PDD version 5 issued on December 21, 2006 serves as the basis for the assessment presented herewith.

## 2.2 Follow-up Interviews

TÜV SÜD performed interviews, see ref. 2, with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of the farms and AgCert Do Brasil Solucoes Ambientais Ltda were interviewed. The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Representatives of the farms	<ul style="list-style-type: none"> <li>• Project design</li> <li>• Technical equipment</li> <li>• Sustainable development issues</li> <li>• Additionality</li> <li>• Crediting period</li> <li>• Monitoring plan</li> <li>• Management system</li> <li>• Environmental impacts</li> <li>• Stakeholder process</li> </ul>
AgCert Brasil	<ul style="list-style-type: none"> <li>• Project design</li> <li>• Technical equipment</li> </ul>



	<ul style="list-style-type: none"><li>• Sustainable development issues</li><li>• Baseline determination</li><li>• Additionality</li><li>• Crediting period</li><li>• Monitoring plan</li><li>• Environmental impacts</li><li>• Stakeholder process</li><li>• Approval by the host country</li></ul>
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## 2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the project design. The Corrective Action Requests (CAR) and Clarification Requests (CR) raised by TÜV SÜD were resolved during communications between the Client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarized in chapter 3 below and documented in more detail in the validation protocol in Annex 1.

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

### 3 VALIDATION FINDINGS

In the following sections the findings of the validation are stated. The validation findings for each validation subject are presented as follows:

- 1) The findings from the desk review of the project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Validation Protocol in Annex 1.
- 2) Where TÜV SÜD had identified issues that needed clarification or that represented a risk to fulfil project objectives, a Clarification Request or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Annex 1. The validation of the project resulted in five Corrective Action Requests and twelve Clarification Requests.
- 3) Where Clarification or Corrective Action Requests have been issued, the exchanges between the Client and TÜV SÜD to resolve these Clarification or Corrective Action Requests is summarized.
- 4) The final conclusions for validation subject are presented.

The validation findings relate to the project design as documented and described in the final project design documentation.

#### 3.1 General Description of Project Activity

##### 3.1.1 Discussion

The project participant is AgCert Do Brasil Solucoes Ambientais Ltda. The project is developed by AgCert International PLC, Ireland. Brazil as the host Party meets all relevant participation requirements.

The objective of the project "AWMS Methane Recovery Project BR06-S-25, Minas Gerais, Brazil" is to apply to the farm GHG mitigation measures which will mitigate GHG emissions in an economically sustainable manner. The project foresees to replace the open air lagoons by positive pressure covered lagoon cells, creating ambient temperature anaerobic digesters.

The project design does reflect current good practice. The design has been professionally developed. A validation of the compatibility of the single components carried out by the project developer resulted in a positive conclusion. The project does moreover apply state of the art equipment.

The project boundaries are clearly defined. The project bundles 3 farms with installations of digesters at 4 sites being contracted in the State of Minas Gerais, Brazil. During this assessment TÜV SÜD contacted and visited 4 sites indicated on the Information Reference List. As the project participant is operating/developing several similar CDM projects in the same or neighboring region, the validation process has shown that no farm of this project is included in any other existing PDD.

The project equipment can be expected to run for the whole project period and it can not be expected that it will be replaced by more efficient technologies.

Initial training and maintenance efforts are required. In the PDD and during the visit on site the project developer confirmed that such training has taken place and/or is envisaged. Documentation on executed and/or planned training activities has been submitted.

The project is currently in line with the relevant legislation and plans in the host country. The required environmental licenses are valid and have been submitted to the validation team.

The project is considered to be in line with the sustainable development policies of Brazil as improvements to manure management as well as energy supply are relevant issues in the national Brazilian policy. The final Letter of Approval by the Brazilian DNA will confirm the opinion of the DOE.

It can be expected that the project will create additional environmental benefits by reducing emissions of Volatile Organics Compounds (VOCs). The project does moreover improve the quality of the fertilizer produced as a by-product to the farming activities.

The funding for the project does not lead to a diversion of official development assistance, as according to the information obtained by the audit team, ODA does not contribute to the financing of the project.

The project starting date and the operational lifetime are clearly defined. The crediting period is clearly defined.

### **3.1.2 Findings**

#### Corrective Action Request 1:

It should be added in the description of the project activity that project emissions occur and a short description what they are.

##### Answer:

Section A.2 of the PDD describes emissions of VOC's.

#### Clarification Request 1:

The description of the technology to be applied provides a sufficient and transparent input to evaluate its impact on the greenhouse gas balance. However, it is not clear to the validation team whether the farms use an enclosed flare as it is described in the PDD. The validation team asks for a technical description including a technical drawing of the flare, where it is mentioned that farms are equipped with an enclosed flare and not an open flare, and for a manufacturer evidence about the estimated efficiency.

##### Answer:

Technical descriptions have been posted to the PDD supporting documents portal.

#### Clarification Request 2:

The number of biodigester modules and its size should be mentioned in the PDD.

See also requested information of CR 1.

##### Answer:

The PDD clearly states digesters shall be sized sufficiently per project.

#### Clarification Request 3:

The documentation about initial training and maintenance (signed participation list and/or date of the scheduled trainings) of all farms should be submitted to the validation team or to the TUV Support Documentation Panel.

##### Answer:

Proposed / conducted training schedule has been posted to the PDD supporting documents portal.

#### Clarification Request 4:

The validation team could identify on-site that a biodigester cell has been recently built. Due to an increase in the number of animals, another biodigester has to be built within 1-3 years. Should the new biodigester be built within 2 years with a distance of less than one kilometre from the existing (old) one, and in case the new biodigester will be part of another PDD, debundling is taken place. AgCert should explain how it is guaranteed that debundling is not taking place over the time. AgCert should inform the validation team what monitoring measures are fulfilled to guarantee that no debundling occurs.

#### Answer:

Site expansion can still be considered as part of the existing project activity.

All projects are plotted using "Google Earth" to ensure locations are not creating a debundling issue. These distances will be considered if at some time in the future AgCert is to build additional digester(s).

### **3.1.3 Conclusion**

All Corrective Action Requests and Clarification Requests are considered to be reasonably resolved.

In order to avoid cases of debundling, AgCert will monitor the locations and the distances between them by using "Google Earth".

Farm Granja Itajuba and farm Granja Sao Francisco of PDD BR20 are proven to be more than 1 km apart, according to GPS coordinates taken from the farm, and the distance between the points where those coordinates were taken and the precise location where biodigesters are planned to be built. Evidences are in annex 3 (pictures and drawings).

The project is according to UNFCCC-SSC regulations.

## **3.2 Baseline Methodology**

### **3.2.1 Discussion**

The project is based on the approved methodology: "Type III, Other Project Activities, Category III.D., Methane Recovery for small-scale projects, version 11". The methodology has been approved by the CDM Executive Board. The selected methodology has been designed for this project and hence the project is part of the methodology on which it is built upon. Therefore the respective baseline methodology is deemed to be the most applicable one for this project. The PDD responds convincingly to each of the applicability criteria which are outlined in the baseline methodology.

The application of the methodology and the discussion and determination of the baseline are transparent. The application follows exactly each of the steps outlined in the methodology and answers the corresponding sections in a proper manner.

The baseline is been determined using reliable assumptions. The parameter "population" as one of the decisive parameters for the quantitative prognosis is determined by using reliable data and is moreover based on data obtained from a year period in the past. In case of planned expansions at farm site it has been considered in the PDD. During the visit on site the availability of such comprehensive data could be observed predominantly. Hence plausible data has been provided from traceable sources ensuring the reliability of the parameter.

The baseline has been based on project specific data and does sufficiently take into account policies and developments regarding legal, economic and social issues. There is no legal requirement to capture and combust greenhouse gases produced by swine manure in AWMS. There is currently also no planned legislation that is directed towards the emission of GHG as related to AWMS. The open air lagoon is hence considered the common AWMS practice in Brazil.

The project demonstrates via the description of barriers that it is not the baseline scenario. Each step of the respective section of the methodology has hereby been applied in a correct manner. The elaborations in the PDD got substantiated by an external expert review. Concluding it has been made clear that the continuation of the AWMS by operating open air lagoons would be the most attractive course of action and hence the baseline scenario. During the visit on site the project owner substantiated these arguments by describing the financial result of the operations in the last two years.

The economic performance, the legal constraints and the common practice have been identified as potential risks to the baseline. The subsequent evaluation resulted in the assessment that no major risks to the baseline exist. This assessment is considered as being plausible.

References have been made to all data sources used.

### **3.2.2 Findings**

#### Corrective Action Request 2:

The project developer shall add the version number to the title of the approved baseline methodology, in order to create a clear reference.

##### Answer:

The new methodology version has been applied for.

#### Corrective Action Request 3:

The farms of . Fazenda Pig Light Sitio 1 & 2 and Granja Itajuba are using solid separators in the baseline AWMS that has to be mentioned clearly in the description of the baseline.

##### Answer:

The sites Fazenda Pig Light Sitio 1 and 2 do not have solid separators.

Granja Itajuba discontinued use of the solid separator due to being legally prohibited. They were using this separator to provide feed for cattle.

#### Corrective Action Request 4:

Regarding the farms "Fazenda Pig Light Sitio I and II" and "Granja Itajuba": According to the farmer's information it had been a solid separator in use before the biodigester entered in operation. Consequently, the methane generation potential and thus methane emission reductions are less than in the case without solid separator. AgCert has to bring evidences that it considered the solid separator in the baseline calculation. According to the PDD it seems that the solid separator has not been considered in the calculations.

##### Answer:

The sites Fazenda Pig Light Sitio 1 and 2 do not have solid separators. Granja Itajuba discontinued use of the solid separator due to being legally prohibited. They were using this separator to provide feed for cattle.

#### Corrective Action Request 5:

The data found on-site are different to those cited in the PDD for the following sites:

Site	Data on-site	Data PDD
Fazenda Buritis	Gilts: 11/2005: 282 12/2005: 329	Gilts: 11/2005: 400 12/2005: 520
Fazenda Pig Light Sitio I	Gilts: Average: 100	Gilts: Average: 150
Granja Itajuba	Gilts: 10/2004: 110 11/2004: 52 12/2004: 78 06/2005: 129	Gilts: 10/2004: 172 11/2004: 211 12/2004: 189 06/2005: 97

Those data have to be adjusted by AgCert which are less conservative in the PDD than on-site.

Answer:

PDD has been updated

Clarification Request 5:

Referring to CAR 3 AgCert is asked to demonstrate how the solid separators are considered in a conservative manner.

Answer:

The sites Fazenda Pig Light Sitio 1 and 2 do not have solid separators.

Granja Itajuba discontinued use of the solid separator due to being legally prohibited. They were using this separator to provide feed for cattle.

Clarification Request 7:

It has to be indicated in the PDD date of completion in *DD/MM/YYYY* and contact information and indicate if the person/entity is also a project participant listed in Annex 1.

Answer:

This information is included in the last submitted PDD.

### 3.2.3 Conclusion

It has been used the most updated version of the methodology, namely version 11. The baseline data, mainly population data, have been verified and are correct. The Corrective Action Request and the Clarification Request are considered to be resolved.

Concluding it can be stated that it has been made plausible that the chosen baseline scenario is the one deemed most realistic under the given frame conditions.

The project is according to UNFCCC-SSC regulations.

## 3.3 Duration of the Project / Crediting Period

### 3.3.1 Discussion

Both the starting date of the project activity and the crediting period are clearly determined as well as the lifetime of the project activity and the length of the fixed crediting period of 10 years.

### 3.3.2 Findings

#### Clarification Request 8:

It has to be explained by AgCert why the 22<sup>nd</sup> of October 2004 is considered as project start. The first contract was signed on May 09, 2005. Therefore the validation team would consider this date as project start.

#### Answer:

This information has been updated in the last submitted PDD.

### 3.3.3 Conclusion

The Clarification Request is considered to be resolved.

## 3.4 Monitoring Plan

### 3.4.1 Discussion

The project is based on the approved monitoring methodology "Type III, Other Project Activities, Category III.D., Methane Recovery for small-scale projects, version 11". The methodology has been approved by the CDM Executive Board.

The selected methodology has been designed for this project and hence the project is part of the methodology it is build upon. Therefore the respective monitoring methodology is deemed to be the most applicable one for this project. The PDD responds convincingly to each of the applicability criteria which are outlined in the monitoring methodology.

Details of the methodology as parameters to be obtained, recording frequency and archiving methods are considered being reasonable and appropriate.

The methodology and its application are described in detail and in a transparent manner. During the visit on site the implementation of the operations and maintenance manual and the data management system in order to ensure a proper implementation of the monitoring plan could be evidenced.

The monitoring plan does include all relevant parameters to determine baseline and project emissions and it is possible to monitor and/or measure the currently specified GHG indicators. The indicators which are not measured can be obtained from IPCC documents. The parameters defined allow calculating the baseline and projecting emissions in a proper manner.

According to the methodology no leakage calculation is required.

The project is considered to have no negative environmental, social and economic effects and a monitoring of such data is also not required by the applied monitoring methodology. This approach is deemed sufficient.

The PDD in combination with the Operations and Maintenance Manual does clearly indicate the authority and responsibilities within the given project structure. During the visit on site it has been described in detail how the respective organizational structure is already implemented and/ or planned. During the visit on site the validation team moreover realized that the project owner is well aware of the tasks and responsibilities.

The overall management responsibility is with AgCert International, Ireland. The company operates also trained staff in Brazil. The farm owner or representatives supports the AgCert staff during the on site audits and carries out the daily supervision of the project components and their performance. The responsibilities for each task are clearly defined and allocated to the Farm owners, AgCert and the service providers.

The quality and environmental management system (QMS and EMS), currently under implementation within AgCert, will help to support the project participants in operating the respective organizational structure.

### **3.4.2 Findings**

#### Clarification Request 9:

The monitoring of project emissions is not explicitly required according to applied methodology, however AgCert is requested to comment on how they would like to monitor potential project emissions in case they occur.

#### Answer:

This information is included as a requirement in the last submitted PDD.

#### Clarification Request 10:

Not all formulae and parameters used to determine baseline emission are clearly indicated:

- The following abbreviations used in the Table E2 has to be explained in the PDD:
  - Days OB
  - BW kg
  - Cap EF

It shall be explained, how the emission factors for finisher (33,82) and nursery (7,85) were calculated. Even if it is less than the calculated emission factor of 49,52 and hence more conservative, it should be made a note with a brief explanation. Those default values shall be noted in the PDD.

#### Answer:

Requested abbreviations have been included in the PDD. Factors are weight adjusted based on animal weights. Since these animals are smaller, they produce less manure thus the EF is smaller. Please see footnote 15 in the PDD for emission factor values.

#### Clarification Request 11

Table E6 of the PDD shows the uncertainty of parameters. However, it is not determined the uncertainty level for each ID. AgCert should add this information.

#### Answer:

Uncertainty factors are addressed in the Monitoring Plan.

#### Clarification Request 12

During the on-site visits the validation team could not always identify a seal of an authorized company and not persuade itself of a fully calibrated flow-meter. AgCert shall explain what monitoring measures are to be taken in order to guarantee sealed and fully calibrated flow meters. AgCert should explain to the validation team how the proper monitoring will be in order to guarantee that each farm uses North American and/or European genetics. Is there any monitoring/verification done at AgCert that identifies changing in genetics in case they occur?

#### Answer:

Flow meters are supplied by the manufacturer calibrated and sealed. They are supplied with a certificate of calibration.

As has been previously discussed, pork producers cannot sustain a profitable business without the use of North American and/or European genetic stock.



### 3.4.3 Conclusion

The QA/QC manual for all involved staff and their responsibility regarding monitoring is ruled sufficiently. Signed contracts are submitted to the validation team.

The validation team can not identify any risks due to inadequate management structure or quality assurance. The above mentioned requests are answered sufficiently.

Regarding Clarification Request 12 on calibration the answer is acceptable at the early stage of the project; it can be expected that the certificate of calibration will be presented to the verification team. The estimations of the validated emission reductions are based on a defined flare efficiency of 98 % methane destruction. It is highlighted that

- this estimate is based on the installation of an enclosed flare, and that
- an independent third party will verify achieved efficiency testing on a sample basis as defined in the monitoring plan of the PDD.

Concerning genetics: the answer is plausible and it was confirmed during the on site visits.

The project is according to UNFCCC-SSC regulations.

## 3.5 Calculation of GHG Emissions by Source

### 3.5.1 Discussion

The project spatial boundaries are clearly described and limited to the farm site. An exact and correct description of the project boundaries is included in chapter B.4 of the PDD. The projects components are clearly defined in the PDD and described in figure B1 of the PDD. During the visit on site the given information has been confirmed.

Details of direct and indirect emissions are discussed in the PDD in an appropriate manner. All aspects are covered by the current approach. All methane (CH<sub>4</sub>) emissions have been considered.

The calculations resulting in the final numbers have been submitted. The formulae used are correctly applied. Since most estimates are derived from accepted international sources, it seems reasonable to assume that they are accurate. The approach is deemed sufficient.

A leakage calculation is not necessary according to the methodology.

Concluding it can be stated that the project emissions will be reduced compared to the baseline scenario by 282,217 tonnes CO<sub>2</sub>e over a crediting period of ten years, resulting in a calculated annual average of 28,222 tonnes CO<sub>2</sub> over a crediting period of ten years.

### 3.5.2 Findings

#### Clarification Request 6:

The project boundary should mention the occurrence of project emissions and in those cases what project emissions, according to the methodology definition (CO<sub>2</sub> emissions from use of fossil fuels or electricity for the operation of the facility), will occur after the implementation of the project activity and include them in the figure "B1 project boundary".

#### Answer:

Direct project emissions are addressed in the last submitted PDD.

### **3.5.3. Conclusion**

The calculation of GHG emissions and used data are according to applied methodology and its requirements. The Clarification Request is considered to be resolved.

## **3.6 Environmental Impacts**

### **3.6.1 Discussion**

The environmental impacts can be seen as being low. These low impacts have been sufficiently described in the PDD.

The legislation does not require an EIA for this type of project. But an environmental license for the site is necessary. This requirement for approval has been fulfilled.

Negative environmental effects are not expected to be created by the project. Given the nature of the project design this seems to be reasonable.

Transboundary effects are not expected as the project site is far from the national boundary.

As no significant environmental impacts are expected, such impacts have not influenced the project design.

### **3.6.2 Findings**

None

### **3.6.3 Conclusion**

The project does comply with the environmental requirements. All environmental licences respectively environmental protocols have been submitted to the validation team.

The project is according to UNFCCC-SSC regulations.

## **3.7 Comments by Local Stakeholders**

### **3.7.1 Discussion**

A formal consultation process with local stakeholders has taken place and corresponding information has been submitted to the audit team. The stakeholders consulted included people from the local community and also the representatives of the local communities and the states. In addition neighbours to the site have been interviewed.

The stakeholders have been invited to meetings via post and electronic mail and which has also been published in local and regional newspapers.

Stakeholder process is required according to national legislation.

The comments to the project design have been recorded and provided. As all comments have been positive, the project design has not been changed due to stakeholder comments.

### **3.7.2 Findings**

None

### **3.7.3 Conclusion**

The Comments of the stakeholders were without exception positive. The project does comply with the requirements.

## **4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS**

TÜV SÜD published the project documents on its website from June 13, 2006 until July 12, 2006 and invited comments within 30 days, by Parties, stakeholders and non-governmental organizations.

Published:

[http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=1814&Ebene1\\_ID=26&Ebene2\\_ID=523&mode=1](http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=1814&Ebene1_ID=26&Ebene2_ID=523&mode=1)

During the commenting period there have been no comments received.

## 5 VALIDATION OPINION

The Certification Body "Climate and Energy" has been ordered by AgCert International PLC, Ireland (AgCert International) to validate the project AWMS Methane Recovery Project BR06-S-25, Minas Gerais, Brazil.

By avoiding GHG emissions from open air lagoons, the project results in reductions of GHG emissions that are real, measurable and give long-term benefits to the mitigation of climate change. An analysis of the investment, technological and legal barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

Additionally the assessment team reviewed the estimation of the projected emission reductions. TÜV SÜD confirms that the indicated amount of emission reductions of 282,217 tonnes CO<sub>2e</sub> over a crediting period of ten years, resulting in a calculated annual average of 28,222 tonnes CO<sub>2e</sub> represents a reasonable estimation using the assumptions given by the project documents.

It is opinion of TÜV SÜD that the project as described in the final project design document issued on December, 2006, meets all relevant UNFCCC requirements for the CDM, set by the Kyoto Protocol, the Marrakech Accords and relevant guidance by the CDM Executive Board; furthermore that the project meets all relevant host country criteria and correctly applies the baseline and monitoring methodology "Type III, Other Project Activities, Category III.D., Methane Recovery for small-scale projects, version 11".

Hence, TÜV SÜD will recommend the project for registration as CDM project activity by the CDM Executive Board.

Prior to the submission of this validation report to the CDM Executive Board, TÜV SÜD will have to receive the written approval of the DNA of involved parties, including confirmation by the DNA of Brazil that the project assists in achieving sustainable development.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

Munich, 10.01.2007



**Werner Betzenbichler**  
Head certification body  
"climate and energy"

Munich, 08.01.2007



**Markus Knödseder**  
Project Manager

Document: Validation Report BR 06-S-25\_08012007-2.doc

Validation of the AWMS GHG Mitigation Project BR06-S–25 in the State of  
Minas Gerais, Brazil



Industrie Service

## **Annex 1: Validation Protocol**



## **Annex 2: Information Reference List**

**Table 1 Project's Environment**

REQUIREMENT	REFERENCE	Comment	CONCLUSION
1. The host country shall be a Party to the Kyoto Protocol	Marrakech Accords, CDM Modalities §30	Brazil has ratified the Kyoto Protocol on August 23, 2002.	<input checked="" type="checkbox"/>
2. Parties participating in the CDM shall designate a national authority for the CDM	Marrakech Accords, CDM Modalities §29	Brazil as participating party has designated a national authority.	<input checked="" type="checkbox"/>
3. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof.	Kyoto Protocol Art. 12.2, Marrakech Accords, CDM Modalities §40a	The project will assist Brazil in achieving a sustainable development. The issuance of the LoA will demonstrate that.	<input checked="" type="checkbox"/>
4. The project shall have the written approval of voluntary participation from the designated national authorities of each party involved.	Kyoto Protocol Art. 12.5a, Marrakech Accords, CDM Modalities §40a	The confirmation by the host country has not been submitted to the validation team and the certification body "Climate and Energy". <i>Before submitting the project for registration the project owner has to provide an eligible Letter of Approval from involved Parties.</i>	<b>Open</b>
5. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3. A letter of approval for participants originating from Annex-I-Countries should be available.	Kyoto Protocol Art.12.2	As the given project is a unilateral project, this issue is not relevant.	<input checked="" type="checkbox"/>

REQUIREMENT	REFERENCE	Comment	CONCLUSION
6. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	The global stakeholder process has taken place from June 13, 2006 until July 12, 2006. There have been no comments received.	<input checked="" type="checkbox"/>
7. The project design document shall be in conformance with the UNFCCC CDM-PDD format	Marrakech Accords, CDM Modalities, Appendix B, EB Decisions	The PDD is in conformance with the UNFCCC CDM-PDD format.	<input checked="" type="checkbox"/>
8. The project participants shall submit a letter on the modalities of communication (MoC) before submitting a request for registration	EB-09 F_CDM_REG form	The letter on MoC will be submitted before submitting a request for registration. <i>Before submitting the project for registration the project owner has to provide an eligible Letter of Approval from involved Parties.</i>	<b>Open</b>



Table 2 PDD

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
<b>A. General Description of Project Activity</b>					
<b>A.1. Project Title</b>					
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	2,3,4	DR , I	The project title is clearly enough to identify the unique CDM activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. Are there an indication of a revision number and the date of the revision?	3,4	DR	Yes, there is an indication of a revision number and the date of the revision.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3. Is this in consistency with the time line of the project's history?	1,2, 3,4	DR , I	Yes, it is consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.2. Description of the project activity</b>					
A.2.1. Is the description delivering a transparent overview of the project activities?	2,3,4	DR , I	The description is delivering a transparent overview of the project activities.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2. Is all information provided in compliance with actual situation or planning?	2,3,4	DR , I	All information is provided in compliance with actual situation or planning.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.3. Are proofs available evidencing all information with relevance for the validity, for the determination of baseline and project emissions and for emission projections?	2,3,4	DR , I	The description of the project activity does not mention anything about project emissions which are calculated further on in the PDD.  <u>Corrective Action Request 1:</u> It should be added in the description of the	CAR 1	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			project activity that project emissions occur and a short description what does project emission include.		
A.2.4. Is all information provided in consistency with details provided by further chapters of the PDD?	3,4	DR	See A.2.3.	See CAR 1	<input checked="" type="checkbox"/>
<b>A.3. Project Participants</b>					
A.3.1. Is the form required for the indication of project participants correctly applied?	3,4	DR	The form for the indication of project participants is correctly applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.2. Is the voluntary participation of all listed entities or Parties confirmed by each of them?	1,2,3, 4	DR , I	The signed contracts between AgCert and the farmers is the confirmation of the voluntary participation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.3. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	3,4	DR	Yes. All provided information is in consistency.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.4. Technical description of the project activity</b>					
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	2,3,4	DR , I	The information provided on the location allows a clear identification of the site.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	1,2,3 ,4,5	DR , I	Yes. The project participant has concluded contracts with the sites allowing him the implementation of the project at the sites.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3. Is the category(ies) of the project activity cor-	3,4	DR	The category is correctly identified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
rectly identified?					
A.4.4. Does the project design engineering reflect current good practices?	3,4	DR	Yes, the project design does reflect current good practice. The design has been professionally developed.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.5. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance?	2,3,4 ,8, 11, 12, 13,2 1,22	DR , I	<u>Clarification Request 1:</u> The description of the technology to be applied principally provides a sufficient and transparent input to evaluate its impact on the greenhouse gas balance. However, it is not clear to the validation team if the farms use an enclosed flare as it is described in the PDD on page 12. The validation team asks for a technical description including a technical drawing of the flare, where it is mentioned that farms are equipped with an enclosed flare and not an open flare, and for an manufacturer evidence about the estimated efficiency.	CR 1	<input checked="" type="checkbox"/>
A.4.6. Is the brief explanation how the project will reduce greenhouse gas emission transparent and suitable?	3,4	DR	Yes, the brief explanation how the project will reduce greenhouse gas emission is transparent and suitable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.7. Is all information provided in compliance with actual situation or planning as available by the project participants?	2,3,4	DR , I	Yes. All information is provided in compliance with actual situation or planning as available by the project participants.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.8. Does the project use state of the art technology	1,2,3	DR	Yes, the project does apply state of the art	CR 2	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
or would the technology result in a significantly better performance than any commonly used technologies in the host country?	,4,8, 11, 12, 13,2 1,22	, I	equipment. <u>Clarification Request 2:</u> The number of biodigester modules and its size should be mentioned in the PDD. See also requested information of CR 1	CR 1	
A.4.9. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2,3 ,4,8, 11, 12, 13,2 1,22	DR , I	No. The project equipment can be expected to run for the whole project period and it can not be expected that it will be replaced by more efficient technologies, but additional components could be added using biogas to generate heat and produce electricity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.10.Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2,3 ,4,10	DR , I	Yes, initial training and maintenance efforts are required. During the visit at the project sites the project developer and the farm owners confirmed that such training has taken place and/or is envisaged. <u>Clarification Request 3:</u> The documentation about initial training and maintenance (signed participation list and/or date of the scheduled trainings) of all farms should be submitted to the validation team or to the TUV Support Documentation Panel.	CR 3	<input checked="" type="checkbox"/>
A.4.11.Does the project make provisions for meeting training and maintenance needs?	1,2,3 ,4,10	DR , I	See A.4.10.	See CR 3	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
	,14				
A.4.12. Is a schedule available on the implementation of the project and are there any risks for delays?	1,2,3 ,4,5	DR ,I	There is a schedule available for the farm sites of the project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.13. Is the form required for the indication of projected emission reductions correctly applied?	3,4	DR	The form required for the indication of projected emission reductions is correctly applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.5. Public Funding</b>					
A.5.1. Is all information on public funding provided in compliance with actual situation or planning as available by the project participants?	1,2,3, 4	DR ,I	No public funding is involved in the project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.5.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 2)?	3,4	DR	Yes. All information is consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>A.6. Bundling/Debundling</b>					
A.6.1. Is there all information provided which shows that the project activity is not a debundled component of a larger project activity?	3,4	DR	Is there all information provided in the PDD which shows that the project activity is not a debundled component of a larger project activity.  <u>Clarification Request 4:</u>  The validation team could identify on-site that a biodigester cell has been recently built. Due to an increase in the number of animals, another biodigester has to be built within 1-3 years. Should the new biodigester be built	CR 4	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			within 2 years with a distance of less than one kilometre from the existing (old) one, and in case the new biodigester will be part of another PDD, debundling is taken place. AgCert should explain how it is guaranteed that debundling is not taking place over the time. AgCert should inform the validation team what monitoring measures are fulfilled to guarantee that no debundling occurs.		
<b>B. Baseline Methodology</b>					
<b>B.1. Choice and Applicability</b>					
B.1.1. Is the baseline methodology previously approved by the CDM Methodology Panel?	3,4,2 9	DR	<p>The baseline methodology III.D Methane Recovery/Version 9 for Small Scale Project Activities has been approved by the CDM Methodology Panel on May 12, 2006.</p> <p><u>Corrective Action Request2:</u></p> <p>The project developer shall add the Version number to the title of the approved baseline methodology, in order to create a clear reference.</p> <p>Recommendation:</p> <p>Agcert shall switch to new approved methodology version 10, since the Brazilian DNA</p>	CAR 2	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			processs will take longer than the version 09 is valid.		
B.1.2. Is the choice of the methodology correctly justified by the PDD?	3,4,29	DR	The choice of the methodology is correctly justified by the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.1.3. Is the baseline methodology the one deemed most applicable for this project?	2,3,4,29	DR, I	The baseline methodology is the most applicable for this project. The project consists of a small-scale project, therefore and under consideration of all other aspects the chosen baseline methodology III.D. Methane Recovery is the most applicable for this project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.1.4. Is the project in conformance with all applicability criteria of the applied methodology?	2,3,4,29	DR, I	The project is in conformance with all applicability criteria of the applied methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.2. Application of the Baseline Methodology / Identification of the Baseline Scenario</b>					
B.2.1. Is the application of the methodology and the discussion and determination of the chosen baseline transparent?	2,3,4,29	DR, I	Yes. The application of the methodology is transparent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.2. Does the application consider all potential baseline scenarios in the discussion?	3,4,29	DR	<u>Corrective Action Request 3:</u> The farms of . Fazenda Pig Light Sitio 1 and 2 and Granja Itajuba are using solid separators in the baseline AWMS that has to be mentioned clearly in the description of the baseline.	CAR 3	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.2.3. Is conservativeness addressed in the way of identifying the baseline?	3,4	DR	<u>Clarification Request 5:</u> Referring to CAR 3 AgCert is asked to demonstrate how the solid separators are considered in a conservative manner	CAR 3 CR 5	<input checked="" type="checkbox"/>
B.2.4. Has the baseline been established on a project-specific basis?	1,2,3 ,4	DR	The baseline has been established on a project-specific basis.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.5. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	1,2,3 ,4	DR , I	The baseline scenario does sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.6. Is the baseline determination compatible with the available data?	2,3,4 ,7,31	DR , I	The baseline determination mentioned in the PDD is not in all points compatible with the available data found on-site.  <u>Corrective Action Request 4:</u> 1. Regarding the farms “Fazenda Pig Light Sitio I and II” and “Granja Itajuba”: According to the farmer’s information, it had been a solid separator in use before the biodigester entered in operation. Consequently, the methane generation potential and thus methane emission reductions are less than in the case without solid separator. AgCert has to bring evidences that it considered the solid separator in the baseline calculation. According to the PDD it seems that the solid separator has not been considered in the calcula-	CAR 4 CAR 5	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl												
			<div>tions. Corrective Action Request 5: 2. The data found on-site are different to those cited in the PDD for the following sites:</div> <table><tr><th>Site</th><th>Data on-site</th><th>Data PDD</th></tr><tr><td>Fazenda Bu-ritis</td><td>Gilts: 11/2005: 282 12/2005: 329</td><td>Gilts: 11/2005: 400 12/2005: 520</td></tr><tr><td>Fazenda Pig Light Sitio I</td><td>Gilts: Average: 100</td><td>Gilts: Average: 150</td></tr><tr><td>Granja Itaju-ba</td><td>Gilts: 10/2004: 110 11/2004 52 12/2004 78 06/2005 129</td><td>Gilts: 10/2004: 172 11/2004: 211 12/2004: 189 06/2005: 97</td></tr></table> <div>Those data have to be adjusted by AgCert which are less conservative in the PDD than on-site. 4</div>	Site	Data on-site	Data PDD	Fazenda Bu-ritis	Gilts: 11/2005: 282 12/2005: 329	Gilts: 11/2005: 400 12/2005: 520	Fazenda Pig Light Sitio I	Gilts: Average: 100	Gilts: Average: 150	Granja Itaju-ba	Gilts: 10/2004: 110 11/2004 52 12/2004 78 06/2005 129	Gilts: 10/2004: 172 11/2004: 211 12/2004: 189 06/2005: 97		
Site	Data on-site	Data PDD															
Fazenda Bu-ritis	Gilts: 11/2005: 282 12/2005: 329	Gilts: 11/2005: 400 12/2005: 520															
Fazenda Pig Light Sitio I	Gilts: Average: 100	Gilts: Average: 150															
Granja Itaju-ba	Gilts: 10/2004: 110 11/2004 52 12/2004 78 06/2005 129	Gilts: 10/2004: 172 11/2004: 211 12/2004: 189 06/2005: 97															
B.2.7. Does the selected baseline represent the most	3,4	DR	Yes. The selected baseline represents the	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
likely scenario among other possible and/or discussed scenarios?			most likely scenario.		
B.2.8. Does the PDD follow the approach for identifying the baseline scenario as given by the approved methodology?	3,4	DR	Yes. The PDD follows the approach for identifying the baseline scenario as given by the approved methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.2.9. Is all literature and sources clearly referenced?	3,4	DR	Yes. All Literature and sources are clearly referenced.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.3. Additionality</b>					
B.3.1. Is the discussion of how emission reductions are achieved by the project scenario in comparison to the identified baseline scenario provided in a transparent manner?	2,3,4	DR ,I	Yes. The discussion of how emission reductions are achieved by the project scenario in comparison to the baseline scenario is provided in a transparent manner through a barrier analysis. The indicated barriers are plausible and could be partly verified on-site by the validation team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.2. In case of using calculation models in order to demonstrate emission reductions: Are all formulae and input data based on provable records?	3,4	DR	For demonstrating the additionality no computer models have been applied	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.3. Does the PDD clearly demonstrate the additionality using the approach as given by the methodology?	3,4,2 9	DR	Yes. The PDD clearly demonstrate the additionality using the approach as given by the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.4. In case of using the additionality tool: Are all steps followed in a transparent and provable manner?	--	--	Not relevant, because the additionality tool has not been used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.3.5. Does the discussion sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	1,2,3 ,4	DR ,I	Yes. The discussion mentions some national and sectoral policies and macro-economic trends.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.6. Does the CDM registration have any impact on the implementation of the project?	1,2,3 ,4	DR ,I	Without the CDM registration the project would not be implemented. The CDM registration plays a key role for the project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.7. Is the approach for demonstrating additionality provided by the most recent (or still applicable) methodology correctly applied?	3,4,2 9	DR	The approach for demonstrating additionality is correctly applied by the most recent methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.8. Are other proofs than anecdotal evidence for all assumptions and statements used by the additionality discussion?	3,4	DR	According to common practise and experience of the validation team it seems to be obvious that the operation of open lagoon system is the baseline scenario and that the farmers will not switch to bio digesting without the investment from AgCert.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.4. Project Boundary</b>					
B.4.1. Are all emission related to the baseline scenario clearly identified and described in a complete manner?	2,3,4	DR ,I	Yes. All emission related to the baseline scenario is clearly identified and described in a complete manner.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.2. In case of grid connected electricity projects: Is the relevant grid correctly identified due to the EB guidance and the underlying methodology?	--	--	This question is not applicable to the project, as it is not a grid connected electricity project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.4.3. Are all emission related to the project scenario clearly identified and described in a complete manner?	2,3,4	DR , I	It is nothing said about the project emissions which are mentioned in the PDD (pp. 32-36). <u>Clarification Request 6:</u> The project boundary should mention if and in case of what project emissions according to the methodology definition (CO <sub>2</sub> emissions from use of fossil fuels or electricity for the operation of the facility) will occur after the implementation of the project activity and include them in the figure "B1 project boundary".	CR 6	<input checked="" type="checkbox"/>
B.4.4. Are all emission related to leakage clearly identified and described in a complete manner?	--	--	Not applicable as a leakage calculation is according to the methodology not required.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>B.5. Detailed Baseline Information</b>					
B.5.1. Is there any indication of a date when determine the baseline?	3,4	DR	It is not indicated in the PDD when the baseline was determined. <u>Clarification Request 7:</u> It has to be indicated in the PDD date of completion in DD/MM/YYYY and contact information and indicate if the person/entity is also a project participant listed in Annex 1.	CR 7	<input checked="" type="checkbox"/>
B.5.2. Is this in consistency with the time line of the PDD history?	3,4	DR	See B.5.1.	See CR 7	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.5.3. Is all data required provided in a complete manner by annex 3 of the PDD?	3,4	DR	The PDD does not have annex 3. Therefore an annexed detailed baseline information is not given. However, the baseline information given in the PDD on pages 17-18 may be considered as sufficient.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.4. Is all data given in compliance with the methodology?	3,4,29	DR	Yes. All data is in compliance with the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.5. Is all data evidence by official data sources or replicable records?	3,4	DR	Yes. All data is evidenced by official data sources or replicable records.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.6. Is the vintage of the baseline data correct?	2,3,4	DR , I	Even though if for almost each farm the population data is indicated for different months because of different dates of assessment by AgCert, the data vintage may be accepted by the validation team as for each farm the vintage of one year is guaranteed.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>C. Duration of the Project / Crediting Period</b>					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	2,3,4	DR , I	It is not clear for the validation team why the projects starting date is the 22.10.2004. All signed contracts were verified. Hereby the first contract was signed for this project activity on May 09, 2005. <u>Clarification Request 8:</u> It has to be explained by AgCert why the 22 <sup>nd</sup> of October 2004 is considered as project	CR 8	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			start. The first contract was signed on May 09, 2005. Therefore the validation team would consider this date as project start.		
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	3,4	DR	Yes. The crediting period is clearly defined with a fixed crediting period of 10 years.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>D. Monitoring Plan</b>					
<b>D.1. Monitoring Methodology</b>					
D.1.1. Is the monitoring methodology previously approved by the CDM Methodology Panel?	3,4,3 0	DR	Yes. The monitoring methodology AMS III.D. (Version 09) "Methane Recovery" has been approved on May 12, 2006.  Recommendation:  Agcert shall switch to new approved methodology version 10, since the Brazilian DNA processs will take longer than the version 09 is valid.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Is the choice of the methodology correctly justified by the PDD?	3,4,3 0	DR	Yes. The choice of the methodology is correctly justified by the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Is the project in conformance with all applicability criteria of the applied methodology?	3,4,3 0	DR	The project is in conformance with all applicability criteria of the applied methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Does the monitoring methodology provide a consistent approach in the context of all pa-	3,4,3 0	DR	Yes. The monitoring methodology provides a consistent approach in the context of all pa-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
parameter to be monitored and further information provided by the PDD?			parameter to be monitored and further information provided by the PDD.		
D.1.5. Does the monitoring methodology apply consistently the choice of the option selected for monitoring both of project and baseline emissions?	3,4,30	DR	The applied and approved methodology does not specify the monitoring of project emissions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>D.2. Monitoring of Project Emissions (if applied)</b>					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project boundary during the crediting period?	2,3,4,14,15	DR, I	<u>Clarification Request 9</u> The monitoring of project emissions is not explicitly required according to applied methodology, however AgCert is requested if and in case of how they would like to monitor potential project emissions.	CR 9	<input checked="" type="checkbox"/>
D.2.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the approved methodology applied?	2,3,4,10,14,15,30	DR, I	The choices of project GHG indicators are reasonable. According to the methodology project emissions do not have to be monitored.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.3. Will it be possible to determine the specified project GHG indicators?	2,3,4,10,14,15,34	DR, I	Yes. The necessary monitoring data and its accuracy will be guaranteed.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.2.4. Will the indicators enable comparison of project data and performance over time?	2,3,4 ,10,1 4,15	DR ,I	Yes. The indicators will enable comparison of project data and performance over time.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	2,3,4 ,10,1 4,15	DR ,I	Yes. The information is sufficient to ensure the verification of a proper implementation of the monitoring plan.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.6. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	2,3,4 ,10,1 4,15	DR ,I	The given information is sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.7. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	2,3,4 ,10,1 4,15	DR ,I	Yes. The monitoring approach is in line with current good practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.8. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	2,3,4 ,10,1 4,15, 31	DR ,I	Not all parameters used for the determination of project emissions are clearly described. Besides, it is not explained in the PDD by AgCert, what components project emissions do include.  However, according to the methodology project emissions do not have to be monitored and may be therefore not requested by the validation team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
<b>D.3. Monitoring of Baseline Emissions (if applied)</b>					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions of the baseline emissions during the crediting period?	2,3,4 ,10,1 4,15	DR ,I	All relevant data necessary for estimation or measuring the GHG emissions of the baseline emissions are given.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the approved methodology applied?	2,3,4 ,10,1 4,15	DR ,I	Yes. The choices of project GHG indicators are reasonable and in conformance with the requirements set by the approved methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.3. Will it be possible to determine the specified project GHG indicators?	2,3,4 ,10,1 4,15	DR ,I	Yes, according to given information the required parameters will be able to be monitored.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.4. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	2,3,4 ,10,1 4,15	DR ,I	Yes. The information is sufficient to ensure the verification of a proper implementation of the monitoring plan.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended	2,3,4 ,10,1 4,15	DR ,I	The given information is sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
changes in data records?					
D.3.6. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	2,3,4 ,10,1 4,15	DR ,I	Yes. The monitoring approach is in line with current good practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3.7. Are all formulae used to determine baseline emission clearly indicated and in compliance with the monitoring methodology.	2,3,4 ,10,1 4,15, 31	DR ,I	<p><u>Clarification Request 10</u></p> <p>Not all formulae and parameters used to determine baseline emission are clearly indicated:</p> <ul style="list-style-type: none"> <li>The following abbreviations used in the Table E2 has to be explained in the PDD: <ul style="list-style-type: none"> <li>- Days OB</li> <li>- BW kg</li> <li>- Cap EF</li> </ul> </li> <li>It shall be explained, how the emission factors for finisher (33,82) and nursery (7,85) were calculated. Even if it is less than the calculated emission factor of 49,52 and hence more conservative, it should be made a note with a brief explanation. Those default values shall be noted in the PDD.</li> </ul>	CR 10	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
<b>D.4. Direct Monitoring of Emission Reductions (if applied)</b>					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring directly the greenhouse gas emissions reductions during the crediting period?	2,3,4 10, 14, 15	I,D R	All relevant data necessary for estimation or measuring the GHG emission reductions are provided.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the approved methodology applied?	2,3,4 10, 14, 15	DR ,I	Yes. The choices of project GHG indicators are reasonable and in conformance with the requirements set by the approved methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.3. Will it be possible to determine the specified project GHG indicators?	2,3,4 10, 14, 15	DR ,I	Yes. It will be possible to determine the specified project GHG indicators.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.4. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	2,3,4 10, 14, 15	DR ,I	Yes. The information is sufficient to ensure the verification of a proper implementation of the monitoring plan.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of po-	2,3,4 10,	DR ,I	The given information is sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
tential for biases or intended or unintended changes in data records?	14, 15		changes in data records.		
D.4.6. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	2,3,4 10, 14, 15	DR ,I	Yes. The monitoring approach is in line with current good practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4.7. Are all formulae used to determine project emission reductions clearly indicated and in compliance with the monitoring methodology.	2,3,4 10, 14, 15, 31	DR	D.3.7.	See CR 9	<input checked="" type="checkbox"/>
<b>D.5. Monitoring of Leakage (if applicable)</b>					
D.5.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring of leakage emissions during the crediting period?	--	--	Not applicable as the project activity does not require a leakage calculation according to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the approved methodology applied?	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.3. Will it be possible to determine the specified project GHG indicators?	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.5.4. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.6. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.5.7. Are all formulae used to determine leakage emissions clearly indicated and in compliance with the monitoring methodology.	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>D.6. Determination of Emission Reductions</b>					
D.6.1. Are all formulae used to determine leakage emissions clearly indicated and in compliance with the monitoring methodology.	--	--	Not applicable. See D.5.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.6.2. Is the information given for each calculated variable sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	2,3	DR ,I	The given information is sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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<b>D.7. Quality Control (QC) and Quality Assurance (QA) Procedures</b>					
D.7.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	3,4,1 6,17, 18,1 9,20	DR	The selection of data is complete.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.7.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?	3,4,1 6,17, 18,1 9,20	DR	There are not determined uncertainty levels for each ID. <u>Clarification Request:11:</u> Page 41 of the PDD shows the uncertainty parameters. However, it is not determined the uncertainty level for each ID. AgCert should add this information.	CR 11	<input checked="" type="checkbox"/>
D.7.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	3,4,1 6,17, 18,1 9,20	DR	The control procedures and quality assurance procedures are sufficiently described. <u>Clarification Request 12:</u> How does AgCert guarantee that the flow-meter which measures the amount of bio-gas produced is sealed and fully calibrated? This is inevitable for a proper monitoring of the project. During the on-site visits the validation team could not always identify a seal of an authorized company and not persuade itself of a fully calibrated flow-meter. AgCert shall to explain which monitoring measures are	CR 12	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			taken in order to guarantee sealed and fully calibrated flow meters.  AgCert should explain to the validation team how the proper monitoring looks like to guarantee that each farm uses North American and/or European genetics. Is there any monitoring/verification done at AgCert that identifies cases immediately if the genetics is changing?		
D.7.4. Is it ensured that data will be bound to national or internal reference standards?	3,4,19	DR	Yes. That data will be bound to national reference standards..	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>D.8. Operational and management structure</b>					
D.8.1. Is the authority and responsibility of project management clearly described?	2,3,4,10	DR, I	The authority and responsibility of project management is clearly described.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	2,3,4,10	DR, I	The authority and responsibility for registration, monitoring, measurement and reporting is clearly described.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.3. Are procedures identified for training of monitoring personnel?	2,3,4,14,15,24,25,2	DR, I	Yes. Corresponding documents have been submitted to the validation team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
	6				
D.8.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	2,3,4 ,14,1 5	DR ,I	Yes. Corresponding documents have been submitted to the validation team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>D.8. Monitoring Plan (Annex 4)</b>					
D.8.5. Is the monitoring plan developed in a project specific manner clearly addressing the unique features of the CDM activity?	--	--	According to SSC-guidance there is no need for an Annex 4 and a monitoring plan. Nevertheless the updated PDD includes additional information about envisioned monitoring for better transparency.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.6. Does the monitoring plan completely describes all measures to be implemented for monitoring all parameter required?	--	--	Not relevant. See D.9.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.7. Does the monitoring plan completely describes all measures to be implemented for ensuring data quality of all parameter to be monitored?		--	Not relevant. See D.9.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.8. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	--	--	.Not relevant. See D.9.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.9. Are procedures identified for calibration of monitoring equipment?	3,4,1 9	DR	See D.7.3.	See CR 11	<input checked="" type="checkbox"/>
D.8.10. Are procedures identified for maintenance of monitoring equipment and installations?	3,4,1 4,15, 24,2	DR	Yes. The document “Especificação do Método” submitted to the validation team, describes such procedures in chapter 4.0.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



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	5,26				
D.8.11. Are procedures identified for monitoring, measurements and reporting?	3,4,1 4,15, 24,2 5,26	DR	The processes for “Collecting” and “Handling” of data is described in the O &M Plan. Including QA/QC measures.  Besides, the document “Especificação do Método” submitted to the validation team, describes such procedures in chapter 6.0 and 7.0.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.12. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	3,4,1 4,15, 24,2 5,26	DR	Yes. The document “Especificação do Método” submitted to the validation team, describes such procedures in chapter 6.0.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.13. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	3,4,1 4,15, 24,2 5,26	DR	Yes. The document “Especificação do Método” submitted to the validation team, describes such procedures in chapter 4.2 and 4.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.14. Does the monitoring plan provide procedures identified for troubleshooting allowing redundant reconstruction of data in case of monitoring problems?	3,4,1 4,15, 24,2 5,26	DR	The procedures for Emergency Maintenance notification are described in 4.3.1 of the O&M Plan. “Alternative Operating Procedures” designed to prevent unintended emissions are found in 4.2.2.7, 4.2.3.6, 4.2.4.5, and 4.2.5.5 of the O&M Plan.  Besides, the document “Especificação do	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Método” submitted to the validation team, describes such procedures in chapter 4.2 and 4.3.		
D.8.15. Are procedures identified for review of reported results/data?	3,4,1 4,15, 24,2 5,26	DR	Yes. Procedures are identified for review of reported results/data.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.16. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	3,4,1 6	DR	Yes. See document I020-2, QA Process-Product Audits from 11/05/03.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.17. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	3,4,1 7	DR	Yes. See document P025, Control of Measuring & Monitoring Devices (MMD) and document I031-5 Receiving Inspection from 19.02.04.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.8.18. Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	3,4,1 8	DR	Yes. See document I005-1, Corrective and Preventive Actions from 21.07.03.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E. Calculation of GHG Emissions by Source</b>					
<b>E.1. Predicted Project GHG Emissions</b>					
E.1.1. Are all aspects related to direct and indirect GHG emissions captured in the project design?	1,2,3 ,4	DR ,I	Not all aspects related to direct and indirect GHG emissions are captured in the project design. See B.2.6. and D.2.1.	See CAR 4, CAR 5, CR 8	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	3,4,3 1	DR	Not all GHG calculations are documented in a complete and transparent manner. See B.2.6., D.2.1..	See CAR 4, CAR 5, CR 9	<input checked="" type="checkbox"/>
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	3,4,3 1	DR	See B.2.6 and D.2.1.	See CAR 4, CAR 5, CR 9	<input checked="" type="checkbox"/>
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	2,3,4 ,29,3 0	DR ,I	According to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	-	-	There is no need for any projection.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.6. Is the projection based on provable input parameter?	-	-	There is no need for any projection.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E.2. Leakage</b>					
E.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified?	--	--	Not applicable as methodology does not require the calculation of leakage.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.2. Have these leakage effects been properly accounted for in calculations?	--	--	N/A. See E.2.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.3. Have conservative assumptions been used to calculate leakage emissions?	--	--	N/A. See E.2.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.2.4. Are uncertainties in the leakage estimates properly addressed in the documentation?	--	--	N/A. See E.2.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	--	--	N/A. See E.2.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.6. Is the projection based on provable input parameter?	--	--	N/A. See E.2.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E.3. Baseline Emissions</b>					
E.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as reference for baseline emissions?	2,3,4 ,29	DR ,I	Yes. The most relevant and likely operational characteristics and baseline indicators have been chosen as reference for baseline emissions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?	2,3,4	DR ,I	Both the baseline boundary for emissions and the spatial boundary are clearly defined.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.3. Are the GHG calculations documented in a complete and transparent manner?	2,3,4 ,8	DR ,I	Not all GHG calculations are documented in a complete and transparent manner. See B.2.6, D.2.1. and D.2.8.	See CAR 4, CAR 5, CR 9	<input checked="" type="checkbox"/>
E.3.4. Have conservative assumptions been used when calculating baseline emissions?	3,4,3 1	DR	See B.2.6	See CAR 4, CAR 5	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.3.5. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	3,4,10,14,31	DR, I	According to the methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.6. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	--	--	There is no need for any projection.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.7. Is the projection based on provable input parameter?	2,3,4,31	DR, I	There is no need for any projection.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>E.4. Emission Reductions</b>					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	2,3,4	DR, I	Yes. The project will result in fewer GHG emissions than the baseline scenario.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	3,4	DR	Yes. The form required for the indication of projected emission reductions is correctly applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.4.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	2,3,4,5	DR, I	Yes. The project's crediting period will start on December, 1 <sup>st</sup> , 2006 and is in line with the schedule found on-site. However for the validation team is not clear why the project start is the 22nd of October 2004. See C.1.1.	See CR 8	<input checked="" type="checkbox"/>
<b>F. Environmental Impacts</b>					
F.1.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	2,3,4	DR, I	Yes. The environmental impacts of the project activity have been sufficiently described.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	2,3,4	DR ,I	An EIA is not necessary.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.3. Will the project create any adverse environmental effects?	2,3,4	DR ,I	No. The project will not create any adverse environmental effects.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.4. Are transboundary environmental impacts considered in the analysis?	2,3,4	DR ,I	Positive transboundary environmental impacts are expected, due to the new equipment and the need for regular monitoring accidents can be identified easier.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.5. Have identified environmental impacts been addressed in the project design?	2,3,4	DR ,I	Identified environmental impacts have been addressed in the project design.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.6. Does the project comply with environmental legislation in the host country?	2,3,4 ,9	DR ,I	The project complies with the environmental legislation in the host country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>G. Stakeholder Comments</b>					
G.1.1. Have relevant stakeholders been consulted?	2,3,4 ,27,2 8	DR ,I	Yes. Relevant stakeholders have been consulted.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	2,3,4 ,27,2 8	DR ,I	The invitations to local stakeholders were sent by postal and electronic mail to local stakeholders.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the	2,3,4 ,27,2	DR ,I	The Brazilian DNA gives guidance how the local stakeholder process has to be con-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
stakeholder consultation process been carried out in accordance with such regulations/laws?	8		ducted. The validation team may confirm that the process has been performed as required.		
G.1.4. Is the undertaken stakeholder process described in a complete and transparent manner?	2,3,4 ,27,2 8	DR ,I	Yes. The undertaken stakeholder process is described in a complete and transparent manner..	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.5. Is a summary of the stakeholder comments received provided?	2,3,4 ,27,2 8	DR ,I	There were made only positive comments supporting the project. Negative comments have not been received.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G.1.6. Has due account been taken of any stakeholder comments received?	2,3,4 ,27,2 8	DR ,I	See G.1.5.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Table 3 Resolution of Corrective Action and Clarification Requests****BR25**

Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
<u>Corrective Action Request 1:</u> It should be added in the description of the project activity that project emissions occur and a short description what does project emission include.	Table 2, A.2.3.	<b>CAR1</b> – Section A.2 of the PDD describes emissions of VOC's.	Issue is considered to be resolved. <input checked="" type="checkbox"/>
<u>Corrective Action Request2:</u> The project developer shall add the Version number to the title of the approved baseline methodology, in order to create a clear reference. Agcert shall switch to new approved methodology version 10, since the Brazilian DNA processs will take longer than the version 09 is valid.	Table 2, B.1.1.	<b>CAR2</b> – V. 2.1 of the PDD has been submitted for review.	Issue is considered to be resolved. <input checked="" type="checkbox"/>
<u>Corrective Action Request 3:</u> The farms of . Fazenda Pig Light Sitio 1 and 2 and Granja Itajuba are using solid separators in the baseline AWMS that has to be mentioned clearly in the description of the baseline.	Table 2, B.2.2.	<b>CAR3</b> – The sites Fazenda Pig Light Sitio 1 and 2 do not have solid separators.  Granja Itajuba discontinued use of the solid separator due to being legally prohibited. They were using this separator to provide feed for cattle.	<u>Fazenda Pig Light Sitio 1 and 2:</u> issue is resolved.  <u>Granja Itajuba:</u> AgCert is requested to provide evidences of the date when the separator has been



Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
			discontinued, and the date when the law prohibiting its use came into force. Evidences have been submitted to the validation team. <input checked="" type="checkbox"/>
<u>Corrective Action Request 4:</u> 1. Regarding the farms “Fazenda Pig Light Sitio I and II” and “Granja Itajuba”: According to the farmer’s information, it had been a solid separator in use before the biodigester entered in operation. Consequently, the methane generation potential and thus methane emission reductions are less than in the case without solid separator. AgCert has to bring evidences that it considered the solid separator in the baseline calculation. According to the PDD it seems that the solid separator has not been considered in the calculations.	Table 2, B.2.6.	<b>CAR3</b> – The sites Fazenda Pig Light Sitio 1 and 2 do not have solid separators.  Granja Itajuba discontinued use of the solid separator due to being legally prohibited. They were using this separator to provide feed for cattle.	<u>Fazenda Pig Light Sitio 1 and 2:</u> issue is resolved.  <u>Granja Itajuba:</u> AgCert is requested to provide evidences of the date when the separator has been discontinued, and the date when the law prohibiting its use came into force. Evidences have been submitted to the validation team. <input checked="" type="checkbox"/>
<u>Corrective Action Request 5:</u> 2. The data found on-site are different to those cited in the PDD for the following sites:	Table 2, B.2.6.	<b>CAR5</b> – PDD has been updated.	Issue is considered to be resolved. <input checked="" type="checkbox"/>



Draft report clarifications and corrective action requests by validation team			Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
Site	Data on-site	Data PDD			
Fazenda Bu-ritis	Gilts: 11/2005: 282 12/2005: 329	Gilts: 11/2005: 400 12/2005: 520			
Fazenda Pig Light Sitio I	Gilts: Average: 100	Gilts: Average: 150			
Granja Itajuba	Gilts: 10/2004: 110 11/2004: 52 12/2004: 78 06/2005: 129	Gilts: 10/2004: 172 11/2004: 211 12/2004: 189 06/2005: 97			
Those data have to be adjusted by AgCert which are less conservative in the PDD than on-site.					
<u>Clarification Request 1:</u> The description of the technology to be applied principally provides a sufficient and transparent input to evaluate its impact on the greenhouse gas balance. However, it is not clear to the validation team if the farms use an enclosed flare as it is described in the			Table 2, A.4.5.	<b>CR1</b> – Technical descriptions have been posted to the PDD supporting documents portal.	Posted technical descriptions and drawings do not ensure that flares are enclosed. We request that a more precise evidence be provided on the type of flare

Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
PDD on page 12. The validation team asks for a technical description including a technical drawing of the flare, where it is mentioned that farms are equipped with an enclosed flare and not an open flare, and for a manufacturer evidence about the estimated efficiency.			that has been used, or that the efficiency of those flares be provided. More precise evidences have been submitted to the validation team. <input checked="" type="checkbox"/>
<u>Clarification Request 2:</u> The number of biodigester modules and its size should be mentioned in the PDD. See also requested information of CR 1	Table 2, A.4.8.	<b>CR2</b> – The PDD clearly states digesters shall be sized sufficiently per project.	Issue is considered to be resolved. <input checked="" type="checkbox"/>
<u>Clarification Request 3:</u> The documentation about initial training and maintenance (signed participation list and/or date of the scheduled trainings) of all farms should be submitted to the validation team or to the TUV Support Documentation Panel.	Table 2, A.4.10.	<b>CR3</b> – Proposed / conducted training schedule has been posted to the PDD supporting documents portal.	Issue is considered to be resolved. <input checked="" type="checkbox"/>
<u>Clarification Request 4:</u> The validation team could identify on-site that a biodigester cell has been recently built. Due to an increase in the number of animals, another biodigester has to be built within 1-3 years. Should the new biodigester be built	Table 2, A.6.1.	<b>CR4</b> – Site expansion can still be considered as part of the existing project activity.	The validation team needs evidence that the closest point between Granja Itajuba and Granja Sao Francisco (PDD 20) is more than 1 km apart.

Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
<p>within 2 years with a distance of less than one kilometre from the existing (old) one, and in case the new biodigester will be part of another PDD, debundling is taken place. AgCert should explain how it is guaranteed that debundling is not taking place over the time. AgCert should inform the validation team what monitoring measures are fulfilled to guarantee that no debundling occurs.</p>			<p>Evidence has been submitted to the validation team.</p> <p><input checked="" type="checkbox"/></p>
<p><u>Clarification Request 5:</u> Referring to CAR 3 AgCert is asked to demonstrate how the solid separators are considered in a conservative manner</p>	<p>Table 2, B.2.3.</p>	<p><b>CAR5</b> – The sites Fazenda Pig Light Sitio 1 and 2 do not have solid separators.</p> <p>Granja Itajuba discontinued use of the solid separator due to being legally prohibited. They were using this separator to provide feed for cattle.</p>	<p><u>Fazenda Pig Light Sitio 1 and 2:</u> issue is resolved.</p> <p><u>Granja Itajuba:</u> AgCert is requested to provide evidences of the date when the separator has been discontinued, and the date when the law prohibiting its use came into force. Evidences have been submitted to the validation team.</p> <p><input checked="" type="checkbox"/></p>
<p><u>Clarification Request 6:</u></p>	<p>Table 2, B.4.3.</p>	<p><b>CR6</b> – Direct project emissions are addressed in</p>	<p>Issue is considered to be</p>

Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
The project boundary should mention if and in case of what project emissions according to the methodology definition (CO2 emissions from use of fossil fuels or electricity for the operation of the facility) will occur after the implementation of the project activity and include them in the figure "B1 project boundary".		the V. 2.1 PDD.	resolved. <input checked="" type="checkbox"/>
<u>Clarification Request 7:</u> It has to be indicated in the PDD date of completion in DD/MM/YYYY and contact information and indicate if the person/entity is also a project participant listed in Annex 1.	Table 2,B.5.1.	<b>CR7</b> – This information is included in the V. 2.1 PDD.	Issue is considered to be resolved. <input checked="" type="checkbox"/>
<u>Clarification Request8:</u> It has to be explained by AgCert why the 22 <sup>nd</sup> of October 2004 is considered as project start. The first contract was signed on May 09, 2005. Therefore the validation team would consider this date as project start.	Table 2, C.1.1.	<b>CR8</b> - This information has been updated in the V.2.1 of PDD.	Issue is considered to be resolved. <input checked="" type="checkbox"/>
<u>Clarification Request 9</u> The monitoring of project emissions is not explicitly required according to applied methodology, however AgCert is requested if and	Table 2,D.2.1..	<b>CR9</b> – This information is included as a requirement in the V. 2.1 of PDD.	Issue is considered to be resolved. <input checked="" type="checkbox"/>


Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
in case of how they would like to monitor potential project emissions			
<p><u>Clarification Request 10</u></p> <p>Not all formulae and parameters used to determine baseline emission are clearly indicated:</p> <ul style="list-style-type: none"> <li>The following abbreviations used in the Table E2 has to be explained in the PDD: <ul style="list-style-type: none"> <li>Days OB</li> <li>BW kg</li> <li>Cap EF</li> </ul> </li> </ul> <p>It shall be explained, how the emission factors for finisher (33,82) and nursery (7,85) were calculated. Even if it is less than the calculated emission factor of 49,52 and hence more conservative, it should be made a note with a brief explanation. Those default values shall be noted in the PDD.</p>	Table 2, D.3.7.	<p><b>CR10</b> – Requested abbreviations have been included in the PDD.</p> <p>Please see footnote 15 for emission factor values.</p>	<p>Issue is partly considered to be resolved.</p> <p>However, only footnote 15 for emission factor values does not explain the different EF values for finisher and nursery. Even if more conservative, it would be helpful to know for the validation team how these values were calculated.</p> <p>Issue is considered to be resolved.</p> <p><input checked="" type="checkbox"/></p>
<p><u>Clarification Request:11:</u></p> <p>Page 41 of the PDD shows the uncertainty parameters. However, it is not determined the uncertainty level for each ID. AgCert should</p>	Table 2, D.7.2.	<p><b>CR11</b> – Uncertainty factors are addressed in the Monitoring Plan.</p>	<p>Issue is considered to be resolved.</p> <p><input checked="" type="checkbox"/></p>

Draft report clarifications and corrective action requests by validation team	Ref. to check-list question in tables 1 and 2	Summary of project owner response	Validation team conclusion
add this information.			
<p><u>Clarification Request 12:</u></p> <p>How does AgCert guarantee that the flow-meter which measures the amount of bio-gas produced is sealed and fully calibrated? This is inevitable for a proper monitoring of the project. During the on-site visits the validation team could not always identify a seal of an authorized company and not persuade itself of a fully calibrated flow-meter. AgCert shall to explain which monitoring measures are taken in order to guarantee sealed and fully calibrated flow meters.</p> <p>AgCert should explain to the validation team how the proper monitoring looks like to guarantee that each farm uses North American and/or European genetics. Is there any monitoring/verification done at AgCert that identifies cases immediately if the genetics is changing?</p>	Table 2, D.7.3.	<p><b>CR12</b> - Flow meters are supplied by the manufacturer calibrated and sealed. They are supplied with a certificate of calibration.</p> <p>As has been previously discussed, pork producers cannot sustain a profitable business without the use of North American and/or European genetic stock.</p>	<p><u>Calibration:</u> the answer is acceptable for Validation, however the certificate of calibration has to be presented to the verification team in the future and the seal of an authorized company may be identified during the on-site visits.</p> <p>☑</p> <p><u>Genetics:</u> the answer is acceptable for Validation, however a monitoring system that can track changes in genetics should be developed for the Verification phase.</p> <p>☑</p>




**Annex 3: Pictures and drawings evidencing the distance between Granja Itajuba  
and Granja Sao Francisco (PDD 20)**




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Reference No.	Document or Type of Information
1	<p>On-site interview at the office of Agcert in São Paulo with the project developer conducted June 2006 by auditing team of TÜV SÜD</p> <p><b>Validation team on-site:</b>  Sandro Marostica      TÜV SÜD Industrie Service GmbH  Wilson Roberto Tomao      TÜV SÜD Industrie Service GmbH</p> <p><b>Interviewed persons:</b>  Miguel Gastão      Agcert  David Lawrence      Agcert</p>
2	<p>On-site interview at the sites by auditing team of TÜV SÜD</p> <p><b>Validation team on-site:</b>  Johann Thaler      TÜV SÜD Industrie Service GmbH</p> <p><b>Interviewed persons:</b>  Friday, 07.07.2006, Granja Itajuba, contact: Anderson Capobiango Vieira (manager)  Tuesday, 11.07.2006, Fazenda Buritis, contact: Jose Humberto Braga (manager)  Tuesday, 18.07.2006, Fazenda Pig Light I, contact: Helcio Jose da Silva (manager)  Tuesday, 18.07.2006, Fazenda Pig Light II, contact: Helcio Jose da Silva (manager)</p> <p>Geraldo de Oliveira      Agcert  Lydse Ida      Agcert</p>
3	Project Design Document (PDD) "AWMS Methane Recovery Project BR 06-S-25, Minas Gerais, Brazil", AgCert International Ltd, June 2006, Version 1
4	Project Design Document (PDD) "AWMS Methane Recovery Project BR 06-S-25, Minas Gerais, Brazil", AgCert International Ltd., December 2006, Version 5.
5	Carbon Contracts with each farm, pdf-files on TUV Support Documentation Portal,

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Reference No.	Document or Type of Information
6	Economic Analysis, Word file on CD, submitted July 2005.
7	Farm Production Data of each farm, pdf-files on TUV Support Documentation Portal (confidential);
8	AWMS Technical Specifications, Word-files on CD, submitted July 2005.
9	Licenses and Permits, pdf-Files on TUV Support Documentation Portal,
10	Project Management, Responsibilities and Process flow, word-files on CD, submitted July 2005.
11	Technical specification of the PVC flexible film (biodigester cover) submitted May, 2005
12	Technical specification on flare unit, submitted May, 2005 (confidential)
13	Technical specification on biodigester, submitted May, 2005 (confidential)
14	Operations and Maintenance (O&M) Plan for AWMS Greenhouse Gas (GHG) Mitigation Projects, dated 23 May 2005 (confidential)
15	Monitoring Documentation "Method specification for small scale projects", word file on TUV Support Documentation Portal, August 2006.
16	Document I020-2, QA Process-Product Audits from 11/05/03.
17	Document P025, Control of Measuring & Monitoring Devices (MMD) and document I031-5 Receiving Inspection from 19.02.04
18	Document I005-1, Corrective and Preventive Actions from 21.07.03.
19	AgCert Quality and Environmental Management System Handbook, August 2004
20	Pre-Assessment Checklist for ISO 9001/ISO14001 certification, issued by QMI
21	Flare Unit Service Specifications, submitted May, 2005 (confidential)
22	Gasflow Meter Service Specifications, submitted May, 2005 (confidential)
23	Post Construction Assessment, AgCert Form, May 2005, file on CD, submitted September 2005
24	Monthly Inventory Reporting, AgCert Form, pdf-file on CD, submitted September 2005
25	Monthly Monitoring Form, AgCert Form MS004-F2, pdf-file on CD, submitted September 2005
26	Weekly Monitoring Form, AgCert Form MS004-1F1, pdf-file on CD, submitted September 2005
27	Correspondence Stakeholder, Published invitations to Stakeholder Meeting in newspapers, emails and pdf-files on TUV Support Documentation Portal,

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Reference No.	Document or Type of Information
28	Minutes of the stakeholder meeting performed, on January 24, 2005, August 22, 2005 and December 7, 2005 in Belo Horizonte.
29	Approved baseline methodology for small scale projects "III.D. Methane Recovery in agricultural and agroindustrial activities, version 11".
30	Approved monitoring methodology for small scale projects "III.D. Methane Recovery in agricultural and agroindustrial activities, version 11".
31	IPCC: Revised 1996 Guidelines for National Greenhouse Gas Inventories
32	IPCC: 2000, Good Practice Guidance
33	Validation and Verification Manual, IETA/World Bank (PCF), <a href="http://www.vvmanual.info">http://www.vvmanual.info</a>