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Validation Report

AGCERT INTERNATIONAL LIMITED, IRELAND

Validation of the AWMS Methane Recovery Project BR06-S-29, São Paulo , Brazil

Report No. 852854, rev. 0

February 25th, 2007

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Contact:		www.tuev-sued.de		
Client:		AgCert International PLC, Ireland Sandyford Business Park The Apex Building Dublin 18, Ireland		
Contract approved by:		Werner Betzenbichler		
Report Title:		Validation of the AWMS Methane Recovery Project BR06-S-29, São Paulo , 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-29, São Paulo , Brazil”, as described in the revised project design document of January 31, 2007 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, version 11 for small-scale projects.

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. TÜD SÜD confirms that the indicated amount of emission reductions of 228,194 tonnes CO_{2e} over a crediting period of ten years, resulting in a calculated annual average of 22,819 tonnes CO_{2e} represents a reasonable estimation using the assumptions given by the project documents.

Work carried out by:	Markus Knödlseder Sandro Marostica	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
PDD	Project Design Document
SSC	Small Scale Project
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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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-29, São Paulo, 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 July 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 January 31, 2007 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 Knödlseder 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.

Sandro Marostica is a Food Engineer with an MBA from IMD, Lausanne Switzerland. He has acquired his first experiences in the CDM market in 2004 through the creation of his broker dealer company in the UK to negotiate CER forward contracts from CDM projects in Brazil. Based in Brazil he has been working for TÜV SÜD since April 06 as General Manager and GHG auditor, and is familiar with local laws and regulations.

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 (project manager, GHG lead auditor)

1.3 GHG Project Description

This project proposes to apply to multiple swine Confined Animal Feeding Operations (located in São Paulo, 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 1 farm with 1 site is contracted in the State of São Paulo, 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 – Agriculture. 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 August 11th, 2005. The crediting period is committed as 10 years fixed crediting period and it starts on 01/06/2007.

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	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	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

checklist question.			conclusions reached.	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 July, 2006, which had been made public on 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 January 31, 2007 serves as the basis for the assessment presented herewith.

2.2 Follow-up Interviews

In August 2006 TÜV SÜD performed interviews 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 Ambientas 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	• Project design • Technical equipment • Sustainable development issues • Additionality • Crediting period • Monitoring plan

	• Management system • Environmental impacts • Stakeholder process
AgCert Brasil	• Project design • Technical equipment • Sustainable development issues • Baseline determination • Additionality • Crediting period • Monitoring plan • Environmental impacts • Stakeholder process • Approval by the host country

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 Clarification and Correction Action 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, Ireland. Brazil as the host Party meets all relevant participation requirements.

The objective of the project ”AWMS Methane Recovery Project BR06-S-29, São Paulo, 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 includes 1 farm with installations of digesters at 1 site being contracted in the State of São Paulo, Brazil. During this assessment TÜV SÜD contacted and visited the sites indicate 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.

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 of what they are.

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

Corrective Action Request 2:

Information on stakeholder process and chronogram for implementation of biodigestors has to be uploaded on the extranet, or be submitted to the validation team.

Answer: Requested information has been posted to the PDD supporting documents portal. See SHM (BR-PS-SP-03-29-2005)

chronogram for implementation

15/11/06	Start
01/01/07	25%
01/02/07	50%
01/03/07	80%
15/03/07	90%
30/03/07	100%
Training: 1st. week of April	

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 farm will 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 an manufacturer evidence about the estimated efficiency.

Answer: An updated drawing of the enclosed flare has been posted to the PDD supporting documents portal. Please see Plano I Ground Level Flare in the "Components/Users Manuals" section.

Corrective Action Request 3:

Since the time of PDD preparation, the farm has undergone expansion. Recently built lagoons and barns should be updated in the PDD.

Answer: The PDD has been updated to reflect the farm expansion.

The capacity in PDD has been updated.

Clarification Request 2:

The number of biodigestor modules and its sizes should be mentioned in the PDD.

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

Clarification Request 3:

The related documentation (signed participation list and/or date of the scheduled trainings) should be submitted to the validation team or to the TUV Support Documentation Panel.

Answer: Construction hasn't started yet. Training documentation will be available as soon as construction is over.

Proposed schedule:

15/11/06	Start
01/01/07	25%
01/02/07	50%
01/03/07	80%
15/03/07	90%
30/03/07	100%
Training: 1st. week of April	

Corrective Action Request 4:

The biodigester is scheduled to be 100% implemented by 30/03/07, but the crediting period starts in Feb 07. Please confirm that emissions reductions are adjusted for such mismatch.

Answer: The Project's crediting period starting date has been changed to June 1, 2007 therefore, no adjustment is required.

Clarification Request 4:

Recently built lagoons (nr. 13 to 16) have a retention time below 21 days, as they were built to be temporary. However, given the schedule for commissioning of biodigestors, AgCert is requested to inform how retention time will be dealt with for those lagoons, before biodigestors become operational. It is also advisable to add into the PDD that those small lagoons are for temporary use until the biodigestors are in use.

Answer: If you divide the cost of the recently built lagoons (R$ 25,000) by their total volume you will get the cost per m3. With the cost per m3 you can easily get to the cost of lagoons for 30 HRT which would be business as usual. The 8 new lagoons have a volume of roughly 960 m3

built at a cost of approximately R$26.00 per m3; at this price the farmer would have to spend R$140,000 to build 30 HRT lagoons for the expansion (not considering that the larger the lagoons are the lower is the cost per m3 because it dilutes the machines mobilization cost). The digester AgCert is building at Fazenda São Domingos will cost R$ 1,100,000.00 Therefore the biodigester is more expensive than business as usual.

Clarification Request 5:

AgCert should provide a general explanation to the validation team on how it will make sure that debundling will not take place over the time. AgCert should inform what monitoring measures are fulfilled to guarantee that no debundling from SSC projects to SSC projects occurs.

Answer: All projects are plotted using “Google Earth” to ensure locations are not creating a debundling issue. Precise GPS coordinates have been included in the PDD.

These distances will be considered if at some time in the future AgCert is to build additional digester(s).

3.1.3 Conclusion

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

S. Domingos farm has undergone a rapid expansion since the validation audit visit. The PDD has been adjusted to reflect such expansion and evidences were provided to show that new small lagoons were built to be an interim solution until the commissioning of the biodigesters, and that the costs of the biodigesters are higher than the costs to built adequate lagoons (business as usual).

Further details to that conclusion are documented in annex 1 of that validation report.

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 build 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 date obtained from a year period in the past. 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 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 5:

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 11.

Answer: The methodology has been submitted for review.

Clarification Request 6:

Within he project boundary it should mention the occurrence of project emissions and in those cases 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.

Answer: Direct project emissions are addressed in the PDD.

Clarification Request 7:

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

Answer: This information is included in the PDD.

3.2.3 Conclusion

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.

Further details to that conclusion are documented in annex 1 of that validation report.

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

None

3.3.3 Conclusion

Duration of the Project and its Crediting Period are appropriated.

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 8

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: The methodology requires inclusion of considering direct project activities emissions to include CO2 emissions from use of fossil fuels and other potential project emissions. The methodology does not require monitoring of potential project emissions; however AgCert has standard operating practices that include operational and visual checks that would indicate any additional project emissions in case they occur.

Clarification Request 9:

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

1, The following abbreviations used in the Table E2 has to be explained in the PDD:

- Days OB
- BW kg
- Cap EF

2. It shall be explained, how the emission factors for finisher (33,82) was 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 explaination. Those default values shall be noted in the PDD.

3. It should be explained how the information on genetics of the farm can be proper monitored in order to guarantee that it uses North American and/or European genetics.

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

Clarification Request 10:

Table E6 of the PDD shows the uncertainty 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 11

AgCert shall explain what monitoring measures will be taken in order to guarantee sealed and fully calibrated flow meters after commissioning.

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

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.

Further details to that conclusion are documented in annex 1 of that validation report.

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 PDD hereby also reflects correctly that emissions from barn systems and barn flushing systems are not considered as these emissions are not affected by the proposed practice change.

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 (CH4) 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 228,194 tonnes CO2e over a crediting period of ten years, resulting in a calculated annual average of 22,819 tonnes.

3.5.2 Findings

None

3.5.3. Conclusion

The calculation of GHG emissions and used data are according to applied methodology and its requirements. Further details to that conclusion are documented in annex 1 of that validation report.

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 required environmental licences or protocols have been submitted to the validation team.

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.

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.

Further details to that conclusion are documented in annex 1 of that validation report.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on its website from **July 18 to August 16, 2006** and invited comments within 30 days, by Parties, stakeholders and non-governmental organizations.

Published:

http://www.netinform.de/KE/Wegweiser/Guide2.aspx?ID=1931&Ebene1_ID=26&Ebene2_ID=555&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 LLC, Ireland (AgCert International) to validate the project AWMS Methane Recovery Project BR06-S-29, São Paulo , 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 228,194 tonnes CO_{2e} over a fixed crediting period of ten years, resulting in a calculated annual average of 22,819 tonnes CO_{2e} 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 January 31, 2007 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.

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, 27.02.2007

Werner Betzenbichler

Head certification body
“climate and energy“

Munich, 27.02.2007

Markus Knödlseder

Project Manager

Annex 1: Validation Protocol