



Industrie Service

**Choose certainty.
Add value.**

TÜV SÜD Industrie Service GmbH · 80684 Munich · Germany

CDM Executive Board



DAP-PL-2885.99
DAP-IS-2886.00
DAP-PL-3089.00
DAP-PL-2722
DAP-IS-3516.01
DPT-ZE-3510.02
ZLS-ZE-219/99
ZLS-ZE-246/99

Your reference/letter of	Our reference/name	Tel. extension/E-mail	Fax extension	Date/Document	Page
	IS-CMS-MUC/Mu Javier Castro	+49 89 5791-2686 javier.castro@tuev-sued.de	+49 89 5791-2756	2008-04-08	1 of 3

Response to Request for Review

Dear Sirs,

Please find below the response to the request for review formulated for the CDM project with the registration number 0450. In case you have any further inquiries please let us know as we kindly assist you.

Yours sincerely,

Javier Castro
Carbon Management Service

Headquarters: Munich
Trade Register: Munich HRB 96 869

Supervisory Board:
Dr.-Ing. Axel Stepken (Chairman)
Managing Director:
Dr.-Ing. Manfred Bayerlein

Telefon: +49 89 5791-2246
Telefax: +49 89 5791-2756
www.tuev-sued.de
TÜV®

TÜV SÜD Industrie Service GmbH
Niederlassung München
Umwelt Service
Westendstrasse 199
80686 Munich
Germany

Issue 1:

1. The average weight of swine was calculated based on the measurements of only sample numbers of swine. This deviates from the approved methodology and the monitoring plan. The DOE closed the CAR 5 raised in this regard by accepting an updated monitoring manual. Further clarification is required on how DOE verified this parameter in line with the approved methodology AM0006.

Response by TÜV SÜD:

The average weight of swine is calculated based on the measurements of a representative sample of animals except for Boars and Sows that are monitored 100%. The attached document "Swine Weight Measurement Operation.doc" clearly presents the way the average values are taken and also the monitoring process. In the attached document "Calculation of Theoretical Sample Size.doc" it is possible to see the calculation of the theoretic sample size. Based on this documentation is clear that the sampling method is representative for the animal population with a confidence level of at least 99%. Additionally the conditions of production are the same in all the farm, the feed used for each stage is the same for the several barns in the site. Furthermore a second weight bridge will be installed in the farm to increase the sample. In conclusion the animals weighed are representing the condition of the entire farm. The result of the measurement of animal weight is presented in the excel and pdf files attached.

Response by Project Participant:

The average weight of sows, boars, porkers, gilts, weaners and piglets used in calculations are representative of total pig population in Bulan island based on attached sample size calculations, at 99% confidence level.

Issue 2:

2. The monitoring plan states that the flare efficiency is not monitored but taken from the design combustion efficiency provided by the equipment designer. However the methodology stipulates this parameter to be monitored and calculated at least semi-annually. As this parameter guarantees the correct performance of the digester and gas recovery, further clarification is required on how the DOE verified this value in line with the approved methodology.

Response by TÜV SÜD:

In order to clarify this issue it is important to be mentioned that the flare used is an open candle-stick flare. A monitoring of the flare efficiency in this type of flares is impossible. In order to guarantee the correct performance of the digester and gas recovery, the equipment has a secured system installed. It consists in a flame detector that automatically closes the valve stopping the gas flow to the flare. It means that while the biogas is running into the system the flare is operating, in case the digester performance is not correct, the flame will not be present therefore the system will be shut down, avoiding the emission of methane not being burned.

Response by Project Participant:

The validation report by DOE, PDD and monitoring plan approved for this project stipulates that the flare combustion efficiency is to be provided by equipment supplier, in this case, PT Organics, as the flare used in our Project is an open candle-stick type flare.