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CDM Executive Board

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	Thomas Kleiser	Thomas.Kleiser@tuev-sued.de			

Request for review

Dear Sirs,

Please find below the response to the request for review formulated for the CDM project with the registration number 1249. In case you have any further inquiries please let us know as we kindly assist you.

Yours sincerely,

Thomas Kleiser
Carbon Management Service

Industrie Service

Response to the CDM Executive Board

Issue 1:
Further clarification is required on how the DOE verified that the methodological requirement of 95% confidence level for periodical measurement of fraction of methane in the biogas was met with.

Response by TÜV SÜD:
The project proponent measured the CH4 content on a monthly basis, complying with the requirements of the methodology that amends quarterly measurements. An excel sheet with 95% confidence level calculations was submitted to the audit team and the correctness of the used value can be confirmed. The verified excel sheet is attached to this response.

Response by Project Participant:
The PDD states that the methane fraction is measured with an interval to satisfy statistical 95% confidence level and at least quarterly. In order to satisfy this demand the periodical measurement of the methane fraction took place according to the PDD and was furthermore calculated in an Excel spread sheet using the 95% confidence level. The steps of the calculation can be followed in this document which is available to the DOE.

Issue 2:
Further clarification is required on how the DOE verified flare efficiency the methodology require "if at any given temperature of the flare is below 500°C, 0% default value should be used for this period".

Response by TÜV SÜD:
The answer of the Clarification Request Nr. 199 has been followed for this project activity, confirming that: "If a thermocouple is used as a flame detection system, it is sufficient to reach the given minimum temperature from the manufacturer."
The PP has submitted the statement of the flare provider confirming the operation of the equipment by 200°C. The statement from the manufacturer is attached to this response.

Response by Project Participant:
The project participant has the opinion that the methodological requirement concerning the flare efficiency should be interpreted as follows:
As open flares cannot be measured in a reliable manner a default value of 50% is to be used provided that it can be demonstrated that the flare is operational. If the flare is not operational a default value of 0% is to be applied. Furthermore it is the opinion of the project participant that in case a thermocouple is used as a flame detection system, it is sufficient to reach the given minimum temperature from the manufacturer to prove the operation of the flare.
This opinion has been confirmed by the Small Scale Working Group (SSC WG) in their response to the clarification request No. 199[1]. The SSC WG clarified that it is sufficient to demonstrate that the flare is operational (e.g. through a flame detection system reporting electronically on continuous basis) to be able to use a default value for the efficiency of the flare of 50%. Furthermore if a thermocouple is used as a flame detection system, it is sufficient to reach the given minimum temperature of the manufacturer.
The project participant followed the published clarification of the SSC WG. According to the manufacturer this flare uses a thermocouple as flame detection system which shows that the flare is

[1] http://cdm.unfccc.int/UserManagement/FileStorage/7UE8OF5N5EKYIV2SW99H2OU9AKG7HM

operational from 200°C and above. With regard to the clarification of the SSC WG this allows using a 50% default value in case the temperature is above 200°C.
To ensure that the flare is not operating without flame this device automatically closes the supply valve in case flame absence is recognized and then starts re-ignition process.
Evidence from the manufacturer of the flare about the flare specifications is available to the DOE.

Issue 3:
Clarification is required that whether the devices (original and replaced) measuring fraction of methane in the biogas complies with “UE standards: EN 61010-1:2001 and EN 50270:1999” as required by the monitoring plan.

Response by TÜV SÜD:
The device that is available on-site for measuring the fraction of methane in the biogas was re-paired and not replaced. This device complies with the “UE standards: EN 61010-1:2001 and EN 50270:1999” as confirmed by the equipment provider Biowin GmbH, Germany. The document is attached to this response.

Response by Project Participant:
The device fulfils the requirements as stated in the PDD. The UE standard EN 61010-1:2001[2] that concerns the general requirements for technical equipment as well as the EN 50270:1999[3] that concerns the electromagnetic compatibility of electrical devices are met. The evidence in written form is available to the DOE.

[2] „Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements“
[3] „Electromagnetic compatibility. Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen“