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Att: CDM Executive Board

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Your ref.:	Our ref.:	Date:
CDM Ref 1455	TRIKA/MLEH	23 March 2009

Response to request for review
"Jinxiang-Golden Elephant N2O Line 1 abatement project" (Ref. no. 1455)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for issuance for CER's for the monitoring periodic 20 March 2008 to 9 May 2008 for project activity "Jinxiang-Golden Elephant N2O Line 1 abatement project" (UNFCCC Ref. No. 1455) project and we would like to provide the following initial response to the issues raised by the requests for review. We also refer to the response provided by the project participants.

Request 1:
Further clarification is required on how: The methodological requirement on EN14181 has been followed with respect to QAL1 as the certificate was issued by the equipment supplier rather than an accredited testing entity.

DNV Response:
The applied monitoring methodology AM0034 version 2 stipulates the European Norm EN14181 as a basis for selecting and operating the automated measuring system (AMS). EN 14181 further refers to three quality assurance level (QAL 1, QAL 2 and QAL3) tests and one annual functional test for the AMS being used. QAL1 (the suitability of AMS) is not included in EN14181, but specified in EN-ISO/DIS 14956 "Air Quality – Evaluation of the suitability of a measurement procedure by comparison with a required measurement uncertainty". This standard specifies methods to calculate uncertainty from single components. It is not a requirement that QAL 1 shall be performed by a third party.

During the initial site visit DNV raised a corrective action for the PP to provide a QAL 1 for the N_2O analyzer, a certificate was provided from the supplier /2/ and the CAR was therefore closed.

DNV is further referring to explanation given by the project participant (PP) where the following is stated regarding the application of QAL 1: "*The way in which the QAL1 uncertainty is applied in CDM is very different to the way it is used for compliance with the European legislation for which it directly applies. Neither EN14181, nor ISO 14956 nor AM0034 version 2 set a specification for allowable uncertainty (as seen with the EU legislation for incinerators and large combustion plants). Instead, in CDM, an uncertainty factor of the stack monitoring system [UNC] is assessed during QAL2. This factor is used to reduce the emission factor of the baseline [EFbl]*

see formula 2 of AM0034 version 2. The combination of lack of specification for allowable uncertainty and the use of the factor UNC in formula 2 of AM0034 version 2 effectively makes the QAL1 requirement redundant. The result of the QAL1 in CDM does not impact the emission reduction and the number of CERs". DNV would like to emphasize the importance of this statement and that the uncertainty used for the monitoring system installed is the uncertainty applied (UNC) for the calculation of the baseline emission factor.

Although, as described above a third party testing is not required for QAL 1, the PP has provided further evidence in response to the request for review. The project participant engaged SGS Environmental Services (ISO 17025 accredited) to provide some assurance over the results from the equipment supplier ADC. SGS visited ADC Gas Analysis in the UK to witness measurements and calculations in order to provide assurance. A letter was provided from SGS stating the measuring system fulfils the requirements of QAL 1 (attachment 1 to this response).

Request 2:
Further clarification is required on how: Baseline N2O emission factor was correctly calculated since the spreadsheet shows a total nitric acid production of 94,095 tones instead of the reported 71,888 tones during the baseline campaign.

DNV Response:
The PP used the NAP value and operating hours until the nitric acid production reached the level of CL_{normal} (the production amounted to 71,888 t at the moment that $CL_{bl} > CL_{normal}$). The requirement of AM0034 v2 is that "N_2O values that were measured beyond the length of CL_{normal} during the production of the quantity of nitric acid (i.e. the final tonnes produced) are to be eliminated from the calculation of EF_{bl}". "Final tonnes" produced was interpreted as "up to CL_{normal}". Clarification was provided in EB 38 (Annex 3 14 March 2008) on the reason not to eliminate variables of Nitric Acid Production (NAP) and Operational Hours (OH) of plant from calculation of N_2O baseline emission factor. It is stated that "Total nitric acid production during the baseline campaign ($tHNO_3$)" and "Total operating hours of the baseline campaign (h)" respectively shall be used. A revised calculation was provided to DNV showing that the total produced nitric acid and the total number of hours (when the nitric acid plant was in operation) during the baseline campaign was used /3/. DNV has checked the calculations of the baseline emission factor and the value is confirmed to be 7.21 kg N_2O/t HNO_3 (previously calculated to 7.28 kg N_2O/t HNO_3). The PP has updated the monitoring report accordingly and the emissions reduction calculations were checked /4/ and confirmed to be 47 495 tonnes CO_2e (previously calculated to 48 016 tonnes CO_2e). See attachment 2 this response.

Request 3:
Other Issue:
The verification report (p.10) contains a statement on the design capacity, in which it calculates the cap based on the design capacity (daily) times 365 days a year, while the PDD (p.3) states that the design operating time is 330 days a year. Further clarification is required.

DNV is referring to the methodology AM0034 which states the following:

Emission Reductions
The emission reductions for the project activity over a specific campaign are determined by deducting the campaign-specific emission factor from the baseline emission factor and multiplying the result by the production output of 100% concentrated nitric acid over the campaign period and the GWP of N_2O:
$ER = (EF_{BL} – EF_P) * NAP * GWP_{N2O} (tCO_2e)$ ***(7)***

Where:
Variable Definition
ER Emission reductions of the project for the specific campaign (tCO_2e)
NAP Nitric acid production for the project campaign (tHNO3). The maximum value of NAP shall not exceed the design capacity.
EF_{BL} Baseline emissions factor ($tN_2O/tHNO_3$)
EF_P Emissions factor used to calculate the emissions from this particular campaign (i.e. the higher of $EF_{ma,n}$ and EF_n)

By nameplate (design) implies the total yearly capacity (considering 365 days of operation per year) as per the documentation of the plant technology provider (such as the Operation Manual). If the plant has been modified to increase production, and such de-bottleneck or expansion projects were completed before December 2005, then the new capacity is considered nameplate, provided proper documentation of the projects is available (such as, but not limited to: properly dated engineering plans or blueprints, engineering,materials and/or equipment expenses, or third party construction services, etc.).

According to AM0034 the nameplate capacity (design) shall thus consider 365 days of operation per year. Reference is made to page 10 of the verification report /1/: "The design capacity is 500 metric tons per day and this corresponds to yearly capacity is 182 500 t HNO_3 (500* 365 days per year) As per AM0034 the maximum value of NAP shall not exceed the design capacity, the nameplate (design) implies the total yearly capacity (considering 365 days of operation per year)". The nitric acid produced in the monitoring period during 51 days is 23 891 t HNO_3. This corresponds to an average production of 468 tonnes per day or 170 985 t HNO_3 in 365 days, thus the production is below the design capacity.

References

/1/ DNV verification report : "Jinxiang - Golden Elephant Line1 N_2O Abatement Project Project" (UNFCCC Ref. No. 1455) for the period 20 March 2008 to 9 May 2008.

/2/ Statements of compliance EN14181 QAL 1 for MGA3000 AMS for N_2O:

Sichuan Golden Elephant Chemical Co. Ltd.: MGA 3000 Certificate

/3/ Excel sheet including baseline campaign data and calculations (filename: 1A_GE_Baseline_1303 2009)

/4/ Excel sheet including project campaign data and calculations (filename: 1A_GE_Project_07_11_2007_to_09_05_2008 (CER_13032009)

Attachments:

1) SGS Netherland BV letter dated 19th March. ISO 14956 testing of an ADC MGA 3000 N_2O monitor and Certificate of compliance with QAL 1 calculation.
2) EcoSecurities Group plc, Monitoring Report for "Jinxiang - Golden Elephant Line1 N_2O Abatement Project", Monitoring Period: 20 March 2008 to 9 May 2008, Date : 23 March 2009

We sincerely hope that the Board accepts our above explanations.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

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Climate Change Service

Trine Kopperud
Head of Section
Climate Change Service