DET NORSKE VERITAS

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Att: CDM Executive Board

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CERTIFICATION AS

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Your ref.:	Our ref.:	Date:
CDM Ref 1784	FEANT/MLEH	03 October 2008

Response to request for review
"Fosfertil Piaçaguera NAP 2 Nitrous Oxide Abatement Project" (1784)

Dear Members of the CDM Executive Board,

We refer to the requests for review raised by three Board members concerning DNV's request for registration of the "Fosfertil Piaçaguera NAP 2 Nitrous Oxide Abatement Project" (1784), and we would like to provide the following response to the issues raised by the requests for review.

Comment 1:

"The PP/DOE are requested to clarify if the review of permitted operating conditions and baseline emission factor for the project activity is part of the validation or not. In doing so, the DOE shall explicitly mention the parameters that are ex-ante and the parameters that have to be verified ex-post by the verifying DOE."

DNV Response:

DNV clarifies that the permitted operating conditions were reviewed during the validation process. However, at the time of writing the validation report the baseline campaign was still being carried out. Therefore, the results from the baseline campaign and thus the actual baseline emissions factor being used to determine baseline emissions will be subject to verification by the verifying DOE.

The following parameters were validated *ex-ante*:

- OT_{normal} – normal range for oxidation temperature;
- OP_{normal} – normal range for oxidation pressure;
- AFR_{max} – maximum ammonia gas flow rate;
- $AIFR_{max}$ – maximum ammonia to air ratio;
- UNC – Overall uncertainty of the monitoring system. (DNV validated only the estimate, see below)
- CL_{normal} - Normal Campaign Length (Average historical campaign length during the operation condition campaign);
- GS_{normal} -Normal gauze supplier for the operation condition campaings (historical campaigns);
- GC_{normal} -Normal gauze Composition for the operation condition campaigns (historical campaigns).

The following parameters need to be verified *ex-post* by the verifying DOE:

- VSG_{BC} – Mean gas volume flow rate at the stack in the baseline measurement period;
- PSG_{BC} -Baseline Pressure of the Stack Gas,
- TSG_{BC} -Baseline Temperature of the Stack Gas,
- $NCSG_{BC}$ – Mean concentration of N_2O in the stack gas during the baseline campaign;
- OH_{BC} – Operating hours of the baseline campaign;
- NAP_{BC} – Nitric acid production during baseline campaign;
- EF_{BL} – Baseline N_2O emission factor;
- BE_{BC} – Total N_2O emissions during the baseline campaign;
- CL_{BL} -Campaign length for baseline campaign;
- GS_{BL} -Gauze supplier for baseline campaign;
- GC_{BC} -Gauze composition for baseline campaign;

- UNC – Overall uncertainty of the monitoring system (this parameter is estimated ex-ante, but is subject to be verified by the verifying DOE after the finalization of the QAL 2 test);
- OT_h -Oxidation temperature;
- OP_h -Oxidation pressure;
- AFR -Ammonia flow rate to AOR;
- AIFR -Ammonia to air ratio;
- VSG – Volume flow rate of the stack gas;
- PSG – Pressure of the Stack Gas,
- TSG – Temperature of the Stack Gas,
- NCSG – Mean concentration of N_2O in the stack gas;
- OH – Operating hours;
- NAP – Nitric acid production;
- PE_n - N_2O emissions of nth project campaign;
- CL_n -Campaign length (to be measured after each campaign);
- $GS_{project}$ -Gauze supplier for project campaign;
- $GC_{project}$ -Gauze composition for project campaign;
- EF_n - Emissions factor calculated for nth campaign;
- $EF_{mn,a}$ - Moving average emissions factor;
- EF_{min} -Minimum emissions factor after 10 campaigns;
- EF_p - Emissions factor used to determine emissions reduction;
- EF_{reg} - Emissions level set by incoming policies or regulations.

The name of the parameters used in the PDD submitted for registration is amended to be fully consistent to the parameters names as given in AM0034 v.2. (ref revised PDD attachment 1).

Comment 2:

"The PP/DOE are requested to clarify why all the parameters required by the AM0034 (version 02) are not included in the monitoring plan of the PDD. In doing so PP/DOE are required to explicitly document all the monitoring requirements such as monitoring frequency, description of monitoring methods and procedures."

DNV Response:

The parameters total N_2O emissions during the baseline campaign (BEBC), total N_2O for project campaign (PEn) and emission factor used to calculate emission reductions (EF_p) are calculated parameters and were described in the PDD, but missed out by mistake in the table in section B.7.1. The revised PDD is updated to include the parameters in the monitoring plan, with the following requirements:

- Total N_2O emissions during the baseline campaign (BE_{BC}): N_2O baseline emission will be calculated based on measurements of stack gas flow rate, N_2O concentration, and the operating hours. All parameters will be measured during a complete campaign before project implementation to properly characterize N_2O baseline emissions. No QA/QC procedure is needed.
- Total N_2O for project campaign (PE_n): N_2O project emission will be calculated based on measurements of; stack gas flow rate, N_2O concentration, and the operating hours. All parameters will be measured during a project campaign to properly characterize N_2O project emissions. No QA/QC procedure is needed.
- Emission factor used to calculate emission reductions (EFp): Emission factor used to calculate the emission from the particular campaign. Calculated using campaign emission factors, EF_p will be determined as the higher of $EF_{mn,a}$ and EF_n. Calculated after end of each project campaign. No QA/QC procedure is needed.

Further the following parameters as follows:

- CL_{BL} -Campaign length for baseline campaign: This parameter will be monitored after each campaign;
- CL_n -Campaign length: Measured during a complete project campaign.

Comment 3:

"The PP/DOE are requested to confirm that the crediting period will not start before the date of registration or the completion of the baseline campaign, which ever is later"

DNV Response:

According to the revised PDD, the crediting period will not start before the date of registration. The baseline campaign has already ended.

We sincerely hope that the Board accepts our above explanations.

Yours faithfully

for DET NORSKE VERITAS CERTIFICATION AS

Michael Lehmann
Director
International Climate Change Service

Peter Molin
Project Manager
International Climate Change Service

Attachments:

1. Revised PDD
2. Revised Validation Report