CDM: Proposed New Methodology
Meth Panel recommendation to the Executive Board
(version 04)
(To be used by the Meth Panel to make a recommendation to the Board regarding a proposed new methodology)

Date of Meth Panel meeting:	6 - 9 September 2005
Related F-CDM-NM document ID number (electronically available to EB members)	F-CDM-NM0117: "Nanjing Chemical Industries Co Ltd (NCIC) Nitrous Oxide Abatement Project"
Related F-CDM-NMex document ID number(s) (electronically available to EB members)	F-CDM-NMex0117: Brodmann / Matsuo
Related F-CDM-NMpu document ID number(s) (electronically available to EB members)	F-CDM-NMpu0117: Heilig

Note to those completing this form, as applicable: Please provide recommendations on the proposed new baseline and monitoring methodologies based on an assessment of CDM-NMB and CDM-NMM and of their application in sections A to E of the draft CDM-PDD, desk reviews and public input. Please ensure that the form is entirely filled and that arguments and expert judgements are substantiated.

A. Preliminary recommendations by the Meth Panel

I. Recommendation on the proposed new baseline methodology: *(checkmark the choice made)*

Title of proposed new baseline methodology:>> Baseline Methodology for catalytic N_2O destruction in the Reactor gas of Nitric Acid plants.

a. To approve this proposed methodology with minor changes

☐

i. Conditions under which this proposed methodology is applicable to other potential CDM project activities (e.g. project type, region, data availability):

>>

ii. Minor changes:

>>

b. To reconsider this proposed methodology, subject to required changes

☒

i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability):

>> The methodology is applicable to project activities in existing nitric acid plants which destroy nitrous oxide (N_2O) in the stack gas of the nitric acid plants and if the following statements are true:

- The applicability should be limited to the existing production capacity measured in tonnes of nitric acid. Existing production capacity is defined as the maximum production level.
- The nitric acid plant has currently not installed any N_2O destruction or abatement technology that reduces the entire N_2O emissions.
- The project activity will not result in any shut down of an existing N_2O destruction or abatement facility at the nitric acid plant.
- The project activity will not cause a nitric acid production increase.

- The project activity will not cause a NO_X-emission increase.
- In case a DeNOx-unit is already installed it is a SCR DeNOx-unit. (SCR = Selective Catalytic Reduction)
- The N_2O baseline emissions and N_2O emissions related to the project activity are measurable in real time upstream and downstream of the catalytic N_2O destruction facility.

In line with similar methodologies (e.g.AM0021 "Baseline methodology for decomposition of N_2O from existing adipic acid production plants" and AM0001 "Incineration opf HFC 23 waste streams"), this methodology should apply to existing plants which have been in operation for (three) years.

ii. Required changes:

>> The methodology needs:

Major Changes:

- Provide a tool for determination of the baseline scenario, and examine the possible baseline scenario other than current practice would be desirable (e.g. recycling of N_2O as a feedstock for the plant, use of N_2O for external purposes).
- Attempt to calculate the baseline N_2O based on the by-production rate (N_2O/HNO_3) and HNO_3 production, taking into account historical value for N_2O production (measured at the tail gas). Such value should take into account conservativeness, by measures such as taking as the lowest figure for the past three years. If no past data exist, such ex-ante value should be based on literatures such as IPCC Good Practice Guidance. The baseline N_2O emissions rate per tonne of nitric acid produced should be capped at a conservative level, in order to minimize the incentive for plant operators for increasing N_2O formation in the ammonia burner via operational parameters. Specify the time period for which the cap applies (e.g. cap on yearly average emissions rate). Caps should be differentiated by production technology.
- Address the possibility of intentional increase in baseline N_2O production (i.e. gaming). One solution is to use ex-ante byproduct rate as shown above.
- Address the potentially large uncertainty with respect to N_2O measurement.
- Address project-related emissions and/or leakage such as energy consumption, taking into account applicability of the methodology and the potential uncertainty as indicated above.
- Redraft the applicability condition, removing the duplications and limiting them only to existing facilities.
- The issue of baseline N_2O decomposition in the process flow downstream of the location of the installation of project activity should be addressed. One way to solve this is to apply the second option listed above.

Minor changes:

- All formulas should be numbered.
- Address the issue of mass flows being calculated by multiplying the average tail gas volume flow rate with the average N_2O concentration and the operation time of the destruction facility in that period. This may not be mathematically correct. Instead, annual mass flows must be calculated by summation of the mass flows in each monitoring interval of the online analyzer. All formulas in the CDM-NMB relating to N_2O mass streams (especially Section D.6) should be changed accordingly. In addition, the methodology should provide a better definition of the operation hours (M_h). Operation hours may be removed from the formulas if summation is done only over those intervals for which measurements are available.
- The role of national or sectoral policies and regulations for control of NO_X emissions should be addressed in more detail. The methodology requires that if DeNOx technology is installed it should be only SCR. But it leaves out of consideration if NSCR is not installed for the time being but can be installed in the baseline scenario in order to reduce NO_X emissions.
- The description of the leakage section should be improved (Section D.8).

(Project participants shall make required changes to the proposed new methodology and

send it back to the Meth Panel. The proposed new methodology will be reconsidered by the Meth Panel if changes required are made by the project participants. The Executive Board will only consider this proposed new methodology after the revised proposed methodology has been reconsidered by the Meth Panel.)

c. Not to approve the proposed methodology

☐

i. Reasons for non-approval:

>>

(A new proposal should be submitted in accordance with the procedures for submission and consideration of proposed new methodologies of the Executive Board.)

II. Recommendation on the proposed new monitoring methodology: *(checkmark the choice made)*

Title of proposed new monitoring methodology: >> Monitoring Methodology for catalytic N_2O destruction in the Reactor gas of Nitric Acid plants.

a. To approve this proposed methodology with minor changes

☐

i. Conditions under which methodology is applicable to other potential projects (e.g. project type, region, data availability):

>>

ii. Minor changes:

>>

b. To reconsider this proposed methodology, subjected to required changes

☒

i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability.):

>> The methodology is applicable to project activities in existing nitric acid plants which destroy nitrous oxide (N_2O) in the stack gas of the nitric acid plants and if the following statements are true:

- The applicability should be limited to the existing production capacity measured in tonnes of nitric acid. Existing production capacity is defined as the maximum production level.
- The nitric acid plant has currently not installed any N_2O destruction or abatement technology that reduces the entire N_2O emissions.
- The project activity will not result in any shut down of an existing N_2O destruction or abatement facility at the nitric acid plant.
- The project activity will not cause a nitric acid production increase.
- The project activity will not cause a NO_X-emission increase.
- In case a DeNOx-unit is already installed it is a SCR DeNOx-unit. (SCR = Selective Catalytic Reduction)
- The N_2O baseline emissions and N_2O emissions related to the project activity are measurable in real time upstream and downstream of the catalytic N_2O destruction facility.

In line with similar methodologies (e.g.AM0021 "Baseline methodology for decomposition of N_2O from existing adipic acid production plants" and AM0001 "Incineration opf HFC 23 waste streams"), this methodology should apply to existing plants which have been in operation for (three) years.

ii. Required changes:

>> Formulas for quantification of N_2O mass streams should be changed as specified in

the CDM-NMB. Alternatively, specify that in installations with SCR DeNOx unit, sampling of tail gas after the destruction facility must occur downstream of the SCR unit to account for possible increases in N_2O in the project activity emissions. Indicate QA/QC procedures such as equipments and their calibration required to ensure that nitric acid production is quantified accurately for short time periods (monitoring intervals).

(Project participants shall make required changes in the proposed new methodology and send it back to the Meth Panel. The proposed new methodology will be reconsidered by the Meth Panel if changes required are correctly made by the project participants. The Executive Board will only consider this proposed new methodology after required changes proposed have been made and the revised proposed methodology has been reconsidered by the Meth Panel.)

c. Not to approve the proposed methodology

☐

i. Reasons for non-approval:

>>

(A new proposal should be submitted in accordance with the procedures for submission and consideration of proposed new methodologies of the Executive Board.)

B. Details of the evaluation of the proposed new methodology by the Meth Panel:

I. Proposed new baseline methodology *(specify title here):* >> Baseline Methodology for catalytic N_2O destruction in the Reactor gas of Nitric Acid plants.

(1) Short description of the methodology, including an assessment of which approach from paragraph 48 of the CDM modalities and procedures was used:

a) Describe the methodology:

>> This methodology concerns projects which attempt to destroy N_2O formulated as a by-product of nitric acid manufacture, through the installation of a secondary catalyst.

N_2O is an inert gas which passes through the subsequent steps unchanged and is released to the atmosphere with the tail gas, unless adequate control equipment is installed. The proposed methodology is intended for project activities which aim at destructing N_2O in the reactor gas of nitric acid plants by installing a special catalyst anywhere between the platinum gauzes of the ammonia burner and the entry of the absorption tower (="secondary" approach for N_2O destruction). The catalyst decomposes N_2O into N_2 and O_2

The methodology assumes that the project activity has no influence on the amount of N_2O formed. Consequently, baseline emissions are quantified ex post based on the volume and N_2O content of the reactor gas stream entering the destruction facility. To this end, continuous online monitoring of the reactor gas is required.

Project emissions are determined based on the monitored volume and N_2O content of the tail gas after the destruction facility. Operation of the destruction facility is assumed not to result in any other emissions (e.g., no consumption of fuels, electricity, or reducing agents).

Emission reductions are calculated as the difference between the baseline and project emissions. No leakage of emissions outside the project boundary is expected.

b) State the approach selected:

>> The approach selected is as per paragraph 48 (a) of the CDM modalities and procedures: "Existing actual or historical emissions".

c) Indicate (in summary form) why the approach selected is the most appropriate. Please provide your expert judgement on the appropriateness of the selected approach to the project category:

>> This approach was selected on the grounds that it is the most consistent approach.

Existing or historical emissions may well be the most plausible approach, but this is selected without consideration of alternatives. Conceivable options are recycling of N_2O as feedstock or external use of N_2O. Such possibilities may be small, but some examination of baseline scenario would be called for. Possibility of installation of N_2O destruction devices such as NSCR (for the purpose of NO_X reduction, etc.) should be specified. See section (2)-d).

(2) Basis for determining the baseline scenario:

a) State whether the documentation explains how the baseline scenario is to be chosen and identified:

>> Section D.1 does not include any tool for selection or baseline scenario. Steps 2-3 and partly 4 of that section are not relevant to the selection of the baseline. Moreover, the baseline scenario is not explicitly determined in the methodology. In its present form, it is a foregone conclusion that, in the absence of regulations to limit N_2O emissions, the only option is to vent.

b) State the basic underlying rationale for algorithms/formulae used (e.g. marginal vs. average basis) (see also section 4 below):

>> The formula for emission reduction is based on simple comparison of quantity of N_2O emissions in the inlet of destruction facility, and quantity of N_2O at the outlet of the destruction facility. The quantity of N_2O is calculated as the product of N_2O concentration and the volume of gas containing N_2O. It is argued that this makes this methodology more prone to intentional increase in by-product N_2O production.

If regulation to limit N_2O is implemented, baseline emission is the emission limit of N_2O (i.e. N_2O reductions are additional only when reduction in emission is in excess of what is mandated by the regulation. This may be the case when additional efforts are required to reduce emissions in excess of legal limit. This may not be the case for the technologies which comes under this methodology.

It is assumed that for N_2O, the environment (temperature, pressure, traces of catalysts) in and downstream of the ammonia burner of nitric acid plants may lead to a partial decomposition of N_2O after formation, i.e. after the platinum gauzes of the ammonia burner. This puts into question whether the measurement of N_2O concentrations immediately after the platinum gauzes, as proposed by the methodology, provides an adequate indicator of the baseline emissions at the stack. In the absence of any corrections for downstream decomposition, this approach can lead to an overstatement of the baseline emissions. It is hoped that the methodology addresses this issue, quantifies its effect, and seeks adjustments in the estimation of baseline (either by quantifying its effect or ensuring conservativeness by other means).

c) State whether the documentation explains how, through the use of the methodology, it can be demonstrated that a project activity is additional and therefore not the baseline scenario. If so, what are the tools provided by the project participants?

>> The methodology demonstrates additionality through the four steps, which, while not identical with the "Tool for the demonstration and assessment of additionality", draws upon it.

Condition:	Corresponding step of "Tool for the demonstration and assessment of additionality"
• Compliance with N_2O regulation at project start.	Step 1 (w/o identifying lawful alternatives)
• Project activity is not common practice.	Step 4 (largely literal quote)
• Project activity not commercially viable w/o CERs	Steps 2 and 1a (largely literal quote)
• ER revenue makes project activity financially viable.	Step 5

As an additional key element, the methodology provides for monitoring of N_2O regulation during the crediting period. Regulatory requirements to control N_2O emissions will be incorporated in the baseline from the moment where implementation of such control becomes mandatory.

d) State whether the basis for determining the baseline scenario and for assessing additionality is appropriate and adequate:

>>

- Baseline scenario determination:

  The methodology does not adequately address the issue of baseline scenario determination. Section D.1 (baseline determination scenario) should be examining the option of various baselines, not defining a decision formula of whether the project activity is additional. Plausible baseline alternatives other than continuation of current practices are as follows:

  i) Recycling of N_2O;

  ii) External use of N_2O (anaesthesia?);

  iii) "Incidental" reduction of N_2O due to policies to reduce NO_X (such as NSCR, which, while being costlier to operate, has the benefit of reducing both NO_X and N_2O);

  iv) The project activity or other measures which intentionally or unintentionally reduce N_2O.

- Additionality:

  The methodology deals with recovery and destruction of N_2O currently vented as a byproduct. As with the case of AM0001 "Incineration of HFC 23 Waste Streams" and AM0021 "Baseline Methodology for decomposition of N_2O from existing adipic acid production plants", additionality is straightforward to demonstrate if it becomes apparent that the baseline is the continuation of current activities. It is concluded that, additionality determination is treated appropriately and adequately save for the cases when "incidental" N_2O reduction is anticipated in as a side effect of NO_X reduction.

(3) Assessment of the description of the proposed methodology and its applicability

a) State whether the methodology has been described in an adequate manner:

>> The methodology is described in an adequate manner, to the extent that the calculation is simple and straightforward. However, there are reservations, as shown below.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMB):

>> The principal concern for the application of the proposed methodology is that possibility of intentional increase in baseline N_2O emissions cannot be ruled out.

According to this methodology, existing emission of N_2O is measured ex post. This makes it vulnerable to intentional increase of N_2O emission, and it should be addressed. Main options are as follows:

- Option 1): If such intentional increase is not possible, clearly state why
- Option 2): Fix baseline N_2O concentration rate (N_2O_co_RG) at some historic (conservative) value
- Option 3): Fix baseline N_2O byproduct rate at some historic (conservative) value and multiply with HNO_3 production.

It is expected that option 1) would be difficult, since, as the methodology suggests, N_2O emission factor will depend on a number of factors (thereby making it particularly susceptible to intentional manoeuvre). Option 2) is not optimal since increase of the volume flow (Q_RG) cannot be ruled out, and reference data are lacking. Option 3) is conceptually the most straightforward, as well as being consistent with methodologies which bear resemblance (e.g. AM0001 "Incinration of HFC 23 Waste Streams", AM0021 "Baseline Methodology for decomposition of N_2O from existing adipic acid production plants"). Furthermore, the byproduct rate can be checked against some known reference (e.g. IPCC Good Practice Guidance) whereas H NO3 production is certain to be properly recorded.

c) State whether the application of the methodology could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity.

>> Yes, if applicability conditions are redrafted (see below).

Please explain:

>> The applicability conditions need redrafting, to be made suitable for all SCR technologies which reduce N_2O emissions.

- Condition 1 includes condition 2 since NSCR is a destruction and abatement technology which reduce N_2O (along with all other forms of oxide);
- Condition 4 may not be necessary since there would be no reason why the methodology should not apply only to those specific to N_2O reduction. If this methodology wishes to exclude NSCR (which consumes reducing agents such as methane as well as consuming energy) or some of the SCR technologies currently being developed, this (as well as its reasons) should be referred as such;
- Condition 6 is not necessary since the question of national regulation is addressed in the calculation formula;
- An additional condition should be imposed which limits application only to existing HNO_3 production capacities. This prevents perverse incentives as well as making it unnecessary to take into account improvement in HNO_3 production efficiency.

If these changes are incorporated into the methodology its application could result in a baseline scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity.

(4) Assessment of algorithms/formulae and type of data needed:

a) State whether the description of the methodology includes algorithms and generic formulae that can be applied to other potential project activities (if not, the proposed new methodology will be considered as a project-specific methodology):

>> The methodology includes algorithms and generic formulae which are potentially applicable to a wide range of byproduct N_2O destruction projects (though the extent of application remains unclear).

b) Explain the spatial scope of data used to determine the baseline and whether the scope is appropriate:

>> Yes, adequate:

Site: N_2O formation (measured at inlet of destruction facility) and emissions (at DF outlet);
Local: Fuel specific emission factors;
National: National regulations (on N_2O control);
Global: IPCC default values, e.g. for hydrocarbon and ammonia emission factors.

c) Explain the vintage of data used (in relation to the duration of the project crediting period) and whether the vintage of data is appropriate, indicating the period covered by the data:

>> Methodology states that "Based on the fact that baseline and project emissions are monitored ex post there is no restriction on the vintage of data". This is appropriate.

(5) Definition of the project boundary related to the baseline methodology:

a) State how the project boundary is defined in terms of:

i) Gases and sources

>> N_2O generated from the nitric acid production facilities, and N_2O remaining after destruction.

ii) Physical delineation

>> Nitric acid production facility.

b) Indicate whether this project boundary is appropriate:

>> It is appropriate, in principle.

(6) Key assumptions/parameters (including emission factors and activity levels) and data sources:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>> It appears that the key assumptions are stability of N_2O formulation (i.e. potential decomposition of N_2O after the gauze, while still in high temperature / pressure conditions).

b) State whether the key assumptions are arrived at in a transparent manner:

>> Not transparent. The methodology makes no mention of this assumption; if this is not an important issue, it should be stated as such.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> Not adequate.

d) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

>> Most data are site-specific. Exceptions are data used for the purpose of projection, which is taken from IPCC Guidelines (1996) & Good Practice Guidance (2000). Regarding national regulations of NO_X and N_2O, no specific sources are indicated.

e) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> The data are adequate and consistent, subject to the changes specified above. Their accuracy and reliability depends on their monitoring methodology, where uncertainty and calibration issues are not properly addressed.

f) State possible data gaps:

>> A possible gap is the following: Emissions from the project activity (energy): please refer to section 8).

(7) Assessment of uncertainties:

a) State whether the methodology includes an assessment of uncertainties regarding:

i) The basis for determining the baseline scenario:

>> No.

ii) Algorithms/formulae:

>> No.

iii) Key assumptions:

>> No.

iv) Data:

>> No.

b) State whether the uncertainties presented are reasonable:

>> No. The key source of uncertainty is the error in estimation of N_2O in the baseline scenario (through flow meter reading). The effect can be so large to potentially make some items pointless.

(8) Leakage:

a) State how the baseline methodology addresses any potential leakage due to the project activity:

>> Leakage is not dealt with since it is claimed that the secondary catalyst will result in no measurable increase in utility usage in the plant. Such effect can either be treated as leakage or project emissions.

b) Indicate whether the treatment for leakage is appropriate and adequate:

>> Not appropriate (even though the eventual leakage may be negligible).

It is not clear from the applicability condition that significant utility usage / energy consumption does not occur (since N_2O destruction technologies employ high temperature and/or pressure. This should be dealt in one of the two ways:

- Clearly state in the applicability condition to exclude N_2O destruction technologies which consumes significant amount of energy (or use CH_4 as a reducing agent);
- Take into account such emissions.

Specifically, emissions as a result of energy consumed at the DF *may* need to be taken into account.

Consideration can be made in the following steps:

- Assessment of the importance;
- If the energy consumption at the DF is deemed significant, then calculation of emissions.

This needs to be addressed. N_2O destruction technologies which do not consume significant amounts of (fossil fuel-based) energy may be screened out at step i), taking into account other source of emissions and uncertainties (i.e. emissions which are negligible, or is significantly smaller in comparison to uncertainty of N_2O estimation can be discounted, and conservativeness can be ensured in other ways). For those technologies deemed necessary to take into account the two factors, reasonable approximation may be used to estimate emissions.

(9) Transparency and "conservativeness":

a) Indicate whether the baseline methodology was developed in a transparent way:

>> Yes, it is transparent.

b) State whether the baseline methodology is conservative:

>> The methodology incorporates conservativeness in neglecting the effect of potential N_2O increase from installing SCR. However, it is possible that substantial amount of N_2O present at the oxidation gauze may be eventually destroyed in the absence of the project activity due to gas phase and catalytic N_2O decomposition. This should be addressed. One of the possible methods is to estimate the byproduct rate (N_2O / HNO_3) on the basis of N_2O at the tail gas.

The methodology anticipates the effect of N_2O regulation, in a way that the baseline emissions are revised as the regulatory limit following the introduction of regulation. This is in line with AM0021 "Baseline Methodology for decomposition of N_2O from existing adipic acid production plants". However, this is not suitable in cases when efforts to reduce N_2O (e.g. energy consumption) is minimal, as is expected for SCR methodologies. In this respect, the methodology runs the risk of not being conservative.

(10) Potential strengths and weaknesses of the proposed baseline methodology *(please explain)***:**

>>

Strengths:

- Simplicity
- Ex-post approach accounting for variations of baseline N_2O.

Weakness:

- Does not address the possibility of gaming, and potentially large uncertainty due to measurement of baseline N_2O.

(11) Other considerations, such as a description of how national and/or sectoral policies and circumstances have been taken into account *(please explain)***:**

>> National and sectoral regulations and policies for control of N_2O will be taken into account:

- Project facility must be in compliance at the start of the project activity;
- N_2O regulation is part of the monitoring and baseline will be adjusted during the crediting period if such regulation is introduced;
- It must be shown that the project activity is not common practice at nitric acid plants in the region.

(12) Applicability of the proposed methodology across project types and regions *(please indicate)***:**

>> The proposed methodology can be applicable to many non-Annex I countries, most of which do not have policies and mandates for N_2O reduction.

The methodology is not applicable across regions for project activities which reduce N_2O emissions at existing nitric acid plants through end-of-pipe treatment of the tail gas ("tertiary approaches" according to CDM-NMB Section B) or to project activities which prevent N_2O formation in the ammonia burner ("primary approaches"), or which destroy N_2O between the ammonia burner and the inlet of the absorption tower ("secondary approaches").

The proposed methodology is, in its present form, not applicable to project types which consumes significant amount of energy and/or has the risk of releasing methane as a reducing agent (e.g. NSCR).

The proposed methodology is, in its form, applicable to all regions.

(13) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

>>

- Analysis of technical issues relating to catalytic N_2O destruction in nitric acid plants. Evaluation of methodologies NM0111 and NM0117. Javier Pérez Ramírez.
- U.S. Adipic Acid and Nitric Acid N_2O Emissions 1990-2020: Inventories, Projections and
- Opportunities for Reductions, EPA
- Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories.

b) Indicate any further comments:

>> No further comments.

II. Proposed new monitoring methodology *(specify title here):* >> Monitoring Methodology for catalytic N_2O destruction in the Reactor gas of Nitric Acid plants

In respect of the proposed new monitoring methodology, evaluate each section of CDM-NMM to the draft CDM-PDD. Please provide your comments section by section:

(1) Brief description of new methodology:

Describe new methodology:

>> The monitoring methodology focuses on the method of monitoring volume flow rate, N_2O concentration and operation hours.

(2) Key assumptions/parameters:

a) List the implicit and explicit key assumptions. Identify those, if any, which are problematic and explain:

>> See above.

b) State whether the key assumptions are arrived at in a transparent manner:

>> Yes.

c) Give your expert judgement on whether the assumptions/parameters are adequate:

>> Yes.

(3) Data sources and data quality:

a) Indicate which data sources are used and how the data are obtained (e.g. official statistics, expert judgement):

>> All data are measured directly on-site.

b) Give your expert judgement on whether the data used are adequate, consistent, accurate and reliable:

>> Yes, though it is believed that calculating the baseline on the basis of N_2O byproduct rate multiplied by HNO_3 production seem to be more straightforward.

c) *State possible data gaps:*

>> None.

4) Assessment of the description of the proposed methodology and its applicability:

a) State whether the proposed methodology has been described in an adequate manner:

>> Generally, yes.

b) State whether the proposed methodology is appropriate for the referred proposed project activity and the referred project context (described in Sections A - E of the draft CDM-PDD and submitted along with CDM-NMM):

>> Appropriate (though it is believed that the baseline methodology should be improved).

c) State whether this proposed monitoring methodology is compatible with the proposed baseline methodology described in CDM-NMB of the draft CDM-PDD:

>> Compatible (though it is believed that the baseline methodology should be improved).

(5) Leakage *(please elaborate, if appropriate)***:**

>> See above.

(6) Quality assurance and control procedures *(please explain)***:**

>> The methodology denotes that calibration procedure is to be developed for routine calibration of key parameters. This needs to be more specific, noting the instrument, calibration frequency and applicable industry standards. It is not clear as to why the uncertainty level can be explained as being low when the QA / QC procedure is not elaborated, and the amount of N_2O produced can fluctuate with respect to various conditions.

(7) Potential strengths and weaknesses of the proposed monitoring methodology *(please explain)***:**

>>

Strength:

- Simplicity

Weakness:

- Key parameters on baseline and project N_2O measurement does not have a built-in check and balance mechanism (e.g. such as comparison of purchase record when measuring electricity generation in power projects). Therefore, extra care is needed to ensure the accuracy of data. The methodology in its current form does not offer a convincing view.

(8) Applicability of the proposed methodology across project types and regions *(please indicate)***:**

>> The proposed methodology is, in its form, not applicable to project types which consume energy and/or has other source of emissions (e.g. use of methane as a reducing agent).

The proposed methodology is, in its form, applicable to all regions.

(9) Any other comments:

a) State whether any other source of information (i.e. other than documentation on this proposed methodology available on the UNFCCC CDM web site) has been used by you in evaluating this methodology. If so, please provide specific references:

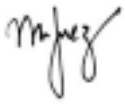
>> See above.

b) Indicate any further comments:

>> No further comments.

Signature of Meth Panel Chair ……..

Date: 14/09/2005 *(Jean-Jacques Becker)*



Signature of Meth Panel Vice-Chair ……..

Date: 14/09/2005 *(José Miguez)*

Information to be completed by the secretariat	
F-CDM-NMmp doc id number	F-CDM-NMmp0117
Date when the form was received at UNFCCC secretariat	14 September 2005
Date of transmission to the EB	14 September 2005
Date of posting in the UNFCCC CDM web site	14 September 2005