

 <p style="text-align: center;">CDM: Proposed New Methodology Meth Panel recommendation to the Executive Board (version 04) <i>(To be used by the Meth Panel to make a recommendation to the Board regarding a proposed new methodology)</i></p>	
Date of Meth Panel meeting:	6 - 9 September 2005
Related F-CDM-NM document ID number (electronically available to EB members)	F-CDM-NM0116: "Reduction in the use of Ordinary Portland Cement for concrete mix preparation"
Related F-CDM-NMex document ID number(s) (electronically available to EB members)	F-CDM-NMex0116: Thorne / Spalding-Fecher
Related F-CDM-NMpu document ID number(s) (electronically available to EB members)	F-CDM-NMpu0116: Zhaoning / Jhon
<p><i>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.</i></p>	
A. Final recommendations by the Meth Panel	
I. Recommendation on the proposed new baseline methodology: (checkmark the choice made)	
Title of proposed new baseline methodology:>> Reduction in the use of Ordinary Portland Cement for concrete mix preparation.	
<p>a. To approve this proposed methodology with minor changes</p> <p><input type="checkbox"/></p> <p>i. Conditions under which this proposed methodology is applicable to other potential CDM project activities (e.g. project type, region, data availability):</p> <p>>></p> <p>ii. Minor changes:</p> <p>>></p>	
<p>b. To reconsider this proposed methodology, subject to required changes</p> <p><input type="checkbox"/></p> <p>i. Conditions under which the proposed methodology is applicable to other potential projects (e.g. project type, region, data availability):</p> <p>>></p> <p>ii. Required changes:</p> <p>>></p> <p><i>(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.)</i></p>	

c. Not to approve the proposed methodology



i. Reasons for non-approval:

>> The methodology lacks a number of issues, which would require a considerable modification of the methodology, including the basic underlying assumption that the project activity leads indirectly to a reduction of cement production. In the following, the most important issues are highlighted (further aspects can be found below.)

- The claimed CERs are based on a problematic and non-conservative assumption.

The methodology suggests that the project activity is reducing no emissions within the project boundary. The claimed CERs result all from positive leakage effects, which is based on a problematic assumption. The methodology assumes that every ton of OPC not consumed in the project activity will directly result in one tone less OPC production at a cement plant. This assumption is neither likely to be true nor conservative.

- Insufficient database for emission reduction calculation.

The methodology lacks a clear and robust procedure on how to gather data on fuel and electricity use for OPC production at cement plants.

- Large potential for double counting.

The project proponent might be neither the producer of OPC nor the final consumer of concrete, which needs to be reflected when assessing additionality. Therefore, the used “Tool for assessment and determination of additionality” needs to be supplemented with specific guidance for this project type, especially clarifications regarding step 2 and 3 are needed. The guidance given by the methodology is confusing and not specific enough.

- Leakage is not treated in an appropriate manner.

Negative leakage due to increase in consumption of OPC elsewhere and emissions from preparation of admixtures and alternate cementitious material outside of the project boundary are not accounted for.

- A clear description on how to identify the baseline scenario is lacking.

The methodology does not indicate how to determine possible different baseline scenarios and gives no substantial guidance on how the most likely baseline scenario is selected.

- Lack of clarity.

The methodology uses unspecific language, and ambiguous terms and instructions. Formulas and their nomenclature would need further clarifications.

(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: >> Reduction in the use of Ordinary Portland Cement for concrete mix preparation.

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.):

>>

ii. Required changes:

>>

(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:

>> The monitoring methodology requires substantial further elaboration. The major issues include:

- Define procedures to monitor the assumption that cement production decreases due to the project activity;
- Justify choice and number of OPC plants to monitor, monitor them throughout the crediting period;
- Make formulas and nomenclature less confusing and clarify that project emissions are related to total OPC used in the project scenario, not just the reduction in OPC use;
- Clarify data sources - do not use "project proponents database" as generic source but specify where data is sourced;
- Quantities of OPC should be measured, not estimated;
- Specify QA/QC requirements;
- Complement the monitoring of leakage;
- In addition, further changes resulting from revisions of the baseline methodology have to be integrated.

(All issues mentioned are substantiated in the relevant sections below.)

(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):** >> Reduction in the use of Ordinary Portland Cement for concrete mix preparation.**(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:*

>> The methodology proposes to estimate the emission reductions from using less energy-intensive materials in concrete mix preparation based on the change in proportion of Ordinary Portland Cement (OPC) used for the mix and a benchmark emission factor for OPC production based on energy use, and therefore emissions, in nearby OPC plants.

b) State the approach selected:

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

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:

>> The approach selected is not the most appropriate. The cement manufacturing sector is worldwide developing towards lower clinker content in the cement mix. It is very likely that the reduction of OPC in concrete mixing is more cost effective than using more clinker and would be implemented under business-as-usual conditions. This points to the inappropriateness of the approach paragraph 48 (a) of the CDM modalities and procedures, which is by definition backward looking or at least not future-oriented. For the identification of the baseline clinker factor, a forward-looking approach should be adopted that is able to capture autonomous developments in cement mixing over time. Approach as per paragraph 48 (b) of the CDM modalities and procedures could be suitable in this respect: “Emissions from a technology that represents an economically attractive course of action, taking into account barriers to investment”.

(2) Basis for determining the baseline scenario:*a) State whether the documentation explains how the baseline scenario is to be chosen and identified:*

>> The baseline scenario has two parts:

- i) What share of OPC would have been used in the concrete mix in the absence of the project activity, and
- ii) What emissions would the OPC production have arisen.

The share of OPC for the baseline scenario is based on national and/or specific guidelines for specific applications, or, if such standards do not exist, the terms of the construction tender documents. The emissions from OPC production are calculated ex-post based on energy consumption of the nearest plants (up to 4) that produce OPC and national average emission factors for clinker production. The second part is not related to the baseline scenario but to baseline emissions. Methodology lacks a solid baseline scenario selection method.

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

>> The underlying key rationale is that a given reduction in OPC consumption at a specific construction site will result in the same reduction in output by OPC manufacturing plants. It also assumes that clinker-related emissions are similar at all plants in the country, and that the materials used for additives do not have any "embodied emissions" and are carbon neutral. As such, the underlying key rationale is rather weak.

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 applies a modification of the "Tool for the demonstration and assessment of additionality". It is not clear whether the text in the CDM-NMB is supposed to supplement the use of the tool or is in place of the tool.

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

>> It is not. For this project type the additionality tool, in particular step 2 and 3, has to be specified in a clearer, more specific and non-ambiguous way. This is a serious weakness of this methodology.

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

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

>> It is well structured and includes algorithms and generic formulas. However, the language is often weak and ambiguous (e.g. expressions like "could be used (p8), could be applied (p6)) and sometimes instructions are not specific enough (e.g. choices are given while clear guidance on how to choose them are missing). This needs thorough revision throughout the methodology.

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):

>> After thorough revisions, yes.

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.

>> No.

Please explain:

>> While using national standards or construction tender documents is a reasonable basis for determining the baseline concrete mix use of OPC, the approach to OPC emissions is not adequate. It is not the case that reduction in demand at a specific construction site will result in a one-to-one reduction in supply - since this demands on the dynamics of supply and demand in that market.

Furthermore, it is not clear how the relevant supply plants should be determined (i.e. 4 plants, up to 4 plants, or how is this number decided?) and whether the market is such that the nearest four plants necessarily supply that site. This will depend on contractual relationships between the construction company and various suppliers, and whether there are OPC plants that have harbour access, since this allows longer range transport. All of the OPC might come from one plant that is the most GHG emission intensive, for example. Furthermore, emissions from the production of clinker are not necessarily the same in all plants.

The additionality assessment needs more elaboration and specification to assure business-as-usual developments in the market are not accounted for CDM projects. These are all serious problems.

(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):

>> They can be applied to other potential project activities.

The description of the formulae for project emissions, however, and nomenclature are confusing. Project emissions should be based on OPC use by the project, which will vary according to whether admixtures, cementitious materials or both are used. The nomenclature and formula need further elaboration and clarifications

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

>> The spatial scope for the OPC in concrete mix is the project site; for clinker emissions it is the country; for fuel emissions from OPC production it is nearby plants (up to 4). As stated above, it is not clear whether using nearby plants (especially when it is not specified how to choose the number) is adequate for clinker fuel use, or whether a national average is sufficient for clinker process emissions.

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:

>> The vintage of the clinker process emissions factor is not specified. For the share of OPC in the mix, it is the year of the issuance of the standard, or the current year of the construction contract. These are 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

>> This is not clear. For OPC production, only CO₂ process and combustion emissions are included, but this is not within the product boundary. Needs more specification.

ii) Physical delineation

>> Concrete mix preparation on-site, plus storage of raw materials and concrete mix on-site. There are contradictory/unclear statements with regard to inclusion of OPC production sites. (p5 vs p7). Needs more specification.

b) Indicate whether this project boundary is appropriate:

>> If emissions from OPC production are to be included in the calculations, then it is logical that these plants must be in the project boundary. The precedence for this is ACM0002 "Consolidated methodology for grid-connected electricity generation from renewable sources", where the project boundary included all plants connected to the relevant grid.

(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:

>>

Assumptions:

- Each ton OPC not used by the project activity is directly resulting in one ton less production of OPC - problematic
Current construction documents or national standards will determine OPC use in concrete mix - OK
- Process emissions from clinker production are the same regardless of where OPC is produced - problematic

- Fuel use at up to four nearest plants is accurate proxy for fuel use for actual OPC that would have been used on site - problematic
- The change in on-site energy emissions from increased admixtures and cementitious materials is negligible - need to proof
- The admixtures and cementitious materials substituted for OPC do not have any "embodied emissions" - OK

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

>> Most are clear but not all are appropriate.

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

>> Not adequate. See above.

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

>>

- Clinker emissions factor: National Inventory or other national official source;
- OPC fuel use: publicly available records;
- Proportion of OPC used in concrete mix in baseline: national standards or construction tender documents;
- Net calorific value: IPCC;
- Oxidation factor: IPCC;
- Carbon emissions factor for fuel: IPCC

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

>> Clinker emissions factor: depends on how recent this work is and the variability across plants.

OPC fuel use: it is not likely that this data is publicly available, and the use of the minimal requirement of one plant ("a maximum of 4") is definitely not appropriate.

f) State possible data gaps:

>> See e) above.

(7) Assessment of uncertainties:

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

i) The basis for determining the baseline scenario:

>> Limited.

ii) Algorithms/formulae:

>> No.

iii) Key assumptions:

>> No.

iv) Data:

>> No.

b) State whether the uncertainties presented are reasonable:

>> They are reasonable but incomplete and not assessed.

(8) Leakage:

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

>> Leakage due to a change in transport of materials is considered, if the transport required for OPC and additives is greater than for OPC alone. Leakage due to decreased durability is excluded by the applicability conditions of the methodology. The methodology says that leakage due to increased consumption of OPC elsewhere (outside the project site) is unlikely.

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

>> It is not. First, the assumption that no leakage due to increase in consumption of OPC elsewhere takes place has to be substantiated. Second, emissions from preparation of admixtures and alternate cementitious material outside of the project boundary have to be accounted for.

(9) Transparency and “conservativeness”:

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

>> In part it is. But especially leakage (changes in the rate of production of OPC, emissions from the admixture) and the definition of how to define emissions related to fuel burning for OPC production is not.

b) State whether the baseline methodology is conservative:

>> Overall, the methodology does not ensure a conservative baseline. However, the only including of CO₂ emissions is considered conservative and should be maintained.

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

>>

Strengths:

- The methodology is simple and straightforward.

Weaknesses:

- The assumption that reduced OPC consumption will reduce production at 1 to 4 nearby plants tonne for tonne.
- Difficulty of obtaining plant-specific fuel use at each OPC plant for baseline.
- The methodology does not assure a conservative baseline definition.
- The additionality test is not specific/clear enough for this project category.

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

>> National policies are taken into account when determining the standards of OPC use in concrete mix in the baseline scenario. They are also considered in the additionality testing.

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

>> The general approach could be widely applicable. However, in the presented form the methodology is not applicable across project types and 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:

>>No.

b) Indicate any further comments:

>> The methodology often confuses the amount of additives and OPC used in the project and baseline

with a reduction in OPC use. It should be clear that both baseline and project emissions are based on total volume of concrete produced and the relevant proportions of different materials. Total emissions from the baseline scenario are not based on the avoidance of OPC, as stated in D.6.

II. Proposed new monitoring methodology (specify title here): >> Reduction in the use of Ordinary Portland Cement for concrete mix preparation.

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 methodology monitors the tonnes/cubic metre of admixtures and cementitious materials added to the OPC to make concrete, as well as the total volume of concrete produced, to determine how much OPC was replaced. The baseline emissions factor for the concrete is based on ex-ante assumptions about the proportion of OPC in concrete mix and ex-ante estimates fuel use in nearby OPC plants.

(2) Key assumptions/parameters:

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

>> Same as mentioned in I.(6) In addition, the monitoring methodology assumes that emissions related to fuel consumption to produce a ton of OPC will remain constant over the whole crediting period. This assumption is not acceptable.

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

>> They are clear but not all are appropriate.

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

>> Not adequate - see above.

(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):

>> OPC use in different project sites, based on how much admixture and cementitious material is added: plant records

Volume of concrete of different mixes: plant records

Proportion of OPC used in concrete mix in baseline: national standards or construction tender documents

Gross volume of concrete in baseline: plant records

OPC fuel use and production from nearby plants: publicly available records

Net calorific value: IPCC

Oxidation factor: IPCC

Carbon emissions factor for fuel: IPCC

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

>> It is not. As mentioned, not only will fuel use of nearby OPC plants potentially be difficult to obtain, but it is not clear that this is the right proxy for reduced emissions due to using less OPC. Also, it is inadequate not to track this data on an annual basis throughout the crediting time of the project.

c) State possible data gaps:

>> Fuel use for OPC production throughout project crediting time.

(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:

>> The same confusing nomenclature and naming of variables is used as in the baseline methodology. It needs further elaboration as mentioned above.

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):

>> After thorough revisions: yes.

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

>> Yes, but needs similar revisions as the baseline methodology.

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

>> The quantities of OPC should be measured, not estimated, and the parameter Q_{RM_PA} is missing. The use of the "project proponents database" is not an appropriate data source - the methodology must specify how the vehicle emissions factor and distances will be measured. In addition, see also issues mentioned under I.(8).

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

>> The explanation of QA/QC is very general - more specific guidance has to be included.

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

>>

Strengths:

- The methodology is simple and straightforward.

Weaknesses:

- Assumptions about impact on OPC production and location of that production.
- It may be very difficult to get fuel use data of the needed OPC plants.

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

>> The general approach could be widely applicable. However, in the presented form the methodology is not applicable across project types and 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:

>> No.

b) Indicate any further comments:

>> See comments on baseline methodology.



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

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