

 <p style="text-align: center;">CDM: Response form for Request for revision of approved methodologies (version 01.1)</p>	
<i>Date of Meth Panel meeting:</i>	04 - 08 May 2009
<i>Title and number of Request for revision</i>	Expand applicability to nitric acid production capacity approved before 31 December 2005 AM_REV_0116
<p>Summary of the query:</p> <p>Please use the space below to summarize the request for revision on the related approved methodologies.</p>	
<p>Introduction</p> <p><i>N₂O emissions from nitric acid plants worldwide</i></p> <p>According to the 2006 report by the US EPA, the global N₂O emissions from nitric acid production was 103 million tons of CO₂ equivalent in 2000, approximately 16% of which was produced in Europe (16.6 million tons in 2003). In Europe, it is not common practice to abate N₂O emissions. Best Available Techniques (BAT) for nitric acid production in Europe were recommended in the European Commission's <i>Integrated Pollution Prevention and Control Reference Document</i>, for which N₂O emissions should be only 0.12-1.85 kg N₂O/tHNO₃ 100%. However, industry does not agree with these N₂O emissions standards because of "limited experience" with catalytic N₂O decomposition in the reactor chamber and "the many technical and operational constraints for applying these techniques...". Thus far, the average European plant still emits 6 kg of N₂O per tonne of nitric acid produced⁵.</p> <p>Despite the reluctance of European producers to implement BAT, CDM has been an effective stimulus to implement <i>novel</i> N₂O abatement technology in nitric acid factories in non-Annex 1 countries. As of June 1, 2008, there were 23 CDM projects registered using AM0034 for the N₂O abatement in nitric acid production, with potential reductions of 5.3 million tCO₂e per annum, and 49 more in validation or requesting registration.</p> <p>Limitations of AM0034 Version 3</p> <p>A large potential for technology for N₂O emissions abatement to be installed is excluded because of the cut-off date in AM0034 Version 3. Because of its large nitric acid production, China is a good example to show how much potential for abatement technology there is that has been excluded due to the cut-off date in AM0034 Version 3 (commercial operation by December 31, 2005). According to a 2007 report by ResearchInChina, the total nitric acid production by the end of 2005 (or the cut-off date) was 2.2 million tons of nitric acid in China. The report then says that a new capacity of 580,000 ton/year nitric acid production was added in 2006 and another 350,000 ton/year was added in the first quarter of 2007. If all of these capacities are fully utilized, this could lead to N₂O emissions of 2.6 million tCO₂e each year for decades. However, according to the current AM0034 Version 3, these capacities are not eligible for CDM projects, meaning that catalytic N₂O decomposition technology will not be installed, since there is neither an incentive to do so, nor is it common practice to do so, even among European producers. If these capacities were eligible under AM0034, one can estimate that 2.1 million tCO₂e from these newly added capacities could be targeted each year in China alone through CDM (assuming a conservative N₂O abatement efficiency of 80%).</p>	

Revision of AM0034 Version 3 could provide continued incentives for application of Best Available Techniques

Because of concerns about gaming, the applicability of N₂O abatement methodologies has been restricted to plants in operation before the cut off date. We propose to expand the applicability of AM0034 version 3 to apply to nitric acid plants that were already approved by the appropriate government entity for construction by the cut-off date of 31 December, 2005 and fulfil this list of requirements:

(a) Approval by the said government entity was necessary to proceed with the construction of the nitric acid production facility

Essentially any project approved by a government authority in 2005 was developed and submitted for approval without the knowledge of CER revenues, just like those projects that started commercial production of nitric acid before December 31, 2005. Project participant (PP) must supply the approval and evidence, like applicable laws or regulations, to show that the government approval provided by the PP is valid. The appropriate government entity cannot be defined at the methodological level because it varies from country to country. By requiring evidence from laws or regulation to be provided with the PDD, it is assured that only the correct approval is presented.

(b) The period of time between the approval and the start of construction is 3 years or less

The point is to demonstrate that the government approval was directly related to the decision to implement the nitric acid plant. This is required as an echo of EB38 para. 54, which says that to rely on values from a Feasibility Study Report (FSR), “The FSR has been the basis of the decision to proceed with the investment in the project, i.e., that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed”. DOEs have applied 1-2 years as a “rule of thumb” for the acceptable gap between the FSR and investment decision. Here we propose to use the descriptions included in the government approval in the same way that FSR values have been used. Allowing for the extra time needed between the investment decision and start of construction, 3 years (maximum) is a realistic time period to relate the construction to the government approval in question.

(c) The actual facility constructed is not materially different from the approved description of the nitric acid facility

This is a second echo of EB 38 para.54, as quoted above. In the proposed revision it must be demonstrated that the input values (e.g., plant size and output) have not materially changed.

(d) The investment decision for the nitric acid facility was taken (provisionally) prior to the date of government approval

Since construction of a nitric acid plant usually cannot proceed without government approval, it is entirely rational that investors in a new plant would take a provisional decision to invest, where the condition that must be fulfilled in order to make the decision final is government approval of the project. Therefore a provisional or conditional approval shows that the intention to invest was there prior to the approval (and prior to December 31, 2005).

The proposed revision permits the applicability of AM0034 version 3 to be expanded while avoiding concerns over gaming.

The proposed revised methodology addresses concerns about “unnecessary new plants” built only to take advantage of CDM

Approval before December 31, 2005: The current AM0034 Version 3 says that new reactors are not eligible; only the “existing capacities” with a cut-off date of December 31, 2005. In the applicability section, our proposed revision says that nitric acid projects approved for construction by the government before December 31, 2005 are also eligible (which may or may not have started commercial production before December 31, 2005), provided the approval was directly related to actual implementation (pp 2-3). Essentially any project approved in 2005 was developed and submitted for approval without the knowledge of CER revenues, just like those projects that started commercial production of nitric acid before December 31, 2005. Therefore, by including projects approved in 2005, the methodology still provides a robust way to exclude unnecessary new nitric acid plants from using CDM, while providing incentives for more facilities to install N₂O abatement technology.

Low potential CER revenue per ton of nitric acid: Capital investment in nitric acid plants is normally in the range of millions of euros to hundreds of millions of euros. Also, the current costs of primary gauzes are in the range of 45-50 euros per gram. Although most of the primary gauze losses can be recovered, the high cost of primary gauzes means an annual working capital of 675,000- 1,000,000 euros is required just for the annual primary gauze loss in a large nitric acid plant (about 15,000-20,000 gram¹⁴).

Recommendation by the Meth Panel:

(a) Please use the space below to provide amendments /changes (in your expert view, if necessary).

The Meth Panel recommends not to accept the request for revision for the following reasons.

The approved methodology AM0034 “Catalytic reduction of N₂O inside the ammonia burner of nitric acid plants” is limited to existing plants that started commercial operation before 31 December 2005 because, among other things, existing plants, once in operation, cannot modify working conditions or operational parameters to increase or decrease N₂O emission. This condition allows them to use IPCC default values because they are conservative for them. In the case of new plants, starting commercial operation after 2005, it is possible to implement measures to reduce N₂O emission during the oxidation process, and thus the use of IPCC values may not be a conservative approach to estimate baseline emissions.

Existing plants, in commercial operation before the end of 2005, do not risk the possibility of displacing production from other producers because even if they do so the total effect in terms of GHG emissions would be the same. In the case of new plants, the situation might not be the same, because, even if the plant will serve to satisfy a possible growing demand, it can also displace production from another plants, both in Annex I and in Non-Annex I countries, that might have already installed N₂O abatement systems. Therefore, there should be a procedure in the methodology to deal with this situation.

Finally, the Meth Panel considers that the applicability condition to include plants that received approval from a government body before the end of 2005 is not a valid condition to allow new plants to use AM0034, as this condition is not considered a strong instrument to guarantee that the plant would have been constructed.

(b) Please use the space below for providing guidance, as per Para 93 of EB25 Report, on what type of projects need to revise the PDD as a consequence of the suggested revision, if the recommendation is to revise the methodology.

The recommendation is not to revise methodology.

Project proponents should refer to the “Guidelines on expansion of industrial gas recovery methodologies to new facilities” when submitting a new request of the revision of AM0034. The guidelines can be found in the following link <http://cdm.unfccc.int/EB/046/eb46_repan10.pdf>

Answer to authors of the request for revision by the Meth Panel :

Please use the space below to provide an answer to the authors of the above query

[See above.](#)


Signature of Meth Panel Chair

Date: 08/05/2009

(Philip Gwage)



Signature of Meth Panel Vice-Chair

Date: 08/05/2009

(Pedro Martins Barata)

Information to be completed by the secretariat

F-CDM-AM	AM_REV_0116
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