CDM: Response form for Request for revision of approved methodologies (version 01.1)

Date of Meth Panel meeting:	18 - 22 January 2010
Title and number of Request for revision	Revision to expand applicability to Caprolactam plants using the HPO® process AM_REV_147

Summary of the query:

Please use the space below to summarize the request for revision on the related approved methodologies.

1. Background

AM0028 was broadened to include Caprolactam plants through the revision AM_REV_0017 in September 2006. The Methodology Panel recommended expanding the scope of the methodology but limiting it to plants employing the Raschig Caprolactam process that do not import sources of nitrogen other than feed ammonia for the plant's ammonia oxidation reactor. This stipulation was added to ensure that the methodology did not apply to Caprolactam plants which do not involve the oxidation of ammonia (main source of N_2O emissions).

2. Request

The proposed revision is intended to broaden the applicability of the methodology to include Caprolactam plants which employ the HPO® (Hydroxylamine Phosphate Oxime) Caprolactam production process, developed by Dutch State Mines (DSM).

Like the Raschig Caprolactam and nitric acid production process, the HPO® process uses an ammonia oxidation reactor to produce NOx gas for the absorption process. During this initial stage N_2O is formed before it enters the tail gas system of the absorption column.

Unlike the Raschig process, N_2O also can be formed in the absorption column from the decomposition of low quantities of Hyam (Hydroxylamine), used in the Caprolactam process and contained in the process liquid returning to the absorption column. Process liquid flows out of the column with desired NOx compounds generated through the oxidation of ammonia, and returns into the top of the column from the caprolactam production area with trace quantities of Hyam. The proposed revision excludes from the baseline the N_2O emissions from Hyam decomposition, even though they are abated by the destruction facility.

The proposed revision also imposes two baseline capping methods according to the onsite production of nitric acid. This report describes how these caps are applied and how they prevent overestimation of emission reductions.

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 accepting the request for revision. The panel has included the two elements of conservativeness, which were not there is the proposed revision :

1. Introduction of a factor of 0.975 in equation (25) corresponding to the lowest products/reactants ratio for the chemical reactions taking place in the oxydation reactor;
2. Calculation of $SEcalcN2O_{,}y$ in equation (28) based on the minimum of the amount of N2O at the inlet of the destruction unit and the amount of N2O generated in the ammonia oxydation reactor.

(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.
Not applicable.
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
As above.

Signature of Meth Panel Chair ……..
Date: 22/01/2010 *(Philip Gwage)*

Signature of Meth Panel Vice-Chair ……..
Date: 22/01/2010 *(Pedro Martins Barata)*

Information to be completed by the secretariat	
F-CDM-AM	AM_REV_0147
Name of the authors of the query:	DNV
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