

 <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>	9 - 13 August 2010
<i>Title and number of Request for revision</i>	<p>Alternative Approach to Appendix II for estimation of the Chemical Oxygen Demand that is lost through sedimentation, and correction of equation 17 in ACM0014 version 03, page 17/37</p> <p>AM_REV_0149</p>
<p><u>Summary of the query:</u></p> <p>Please use the space below to summarize the request for revision on the related approved methodologies.</p> <p>ACM0014 “Mitigation of greenhouse gas emissions from treatment of industrial wastewater” is applicable to project activities that aim at reducing methane emissions from industrial wastewater treatment.</p> <p>This request for revision aims at correcting equation no. 17 and providing an alternative approach to determine the amount of Chemical Oxygen Demand (COD) that is lost through sedimentation presented in Appendix 2 by a conservative empirical model. The following two modifications are proposed:</p> <p>(1) Equation 17 of ACM0014 ver 03 calculates $EF_{BL,EL,captive}$. However, the equation contains an error. In order to have the unit of $EF_{BL,EL,captive}$ in tCO_2/MWh, when the unit of $EF_{CO_2,FF,captive}$ is tCO_2/TJ, the right hand side of the equation ($EF_{BL,EL,captive}/\eta_{EL,captive}$) should be multiplied by 3.6/1000 instead of only 3.6.</p> <p>(2) The methodology provides two methods for the estimation of methane emissions from open lagoons. The second method; Organic Removal Ratio Method (ORR method) involves a parameter $COD_{sedim,BL,y}$ (COD lost through sedimentation in the lagoon or sludge pit before the start of the project activity). A detailed procedure has been provided in the appendix 2 of the methodology to estimate $COD_{sedim,BL,y}$. The project participants claim that the procedure is quite cumbersome due to the magnitude of the data required and no project participants have such detailed data prior to decision of project activity. Therefore, the project participants proposes an alternative procedure, the empirical model, to estimate $COD_{sedim,BL,y}$. Based on the empirical model, the COD lost through sedimentation accounts to 4.7%. The proposed equation to calculate the COD lost through sedimentation is:</p> $COD_{sedim} = 0.56 (0.3F_{VSS,0} + 0.071F_{BOD,0})$ <p>Where: F_{VSS} is the mass flow rate of volatile suspended solids (kg/day) F_{BOD} is the flow rate of BOD_5 (kg/day)</p>	
<p><u>Recommendation by the Meth Panel:</u></p> <p>(a) Please use the space below to provide amendments /changes (in your expert view, if necessary).</p> <p>Please, refer to the box below.</p>	

(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.

Please, refer to the box below.

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

The Meth Panel informs that, regarding the first proposed revision, the equation 17 (along with equations 15, 16 and 18) has already been corrected in the revision of ACM0014 version 03 to version 03.1 (See Executive Board Forty-seventh Meeting Report, Annex 9).

The Meth Panel recommends:

(1) Not to accept the second proposed revision, due to following reasons:

- (a) The values chosen for COD content of solids (C1) does not match with the actual reference quoted, i.e. Colin *et al* (2007), in the request for revision. The value in the literature (Colin *et al*, 2007) refers to methanogenic activity relating to amount of methane produced by microbes;
- (b) The f_l and f_3 value referred in the request does not match with the study by Saqqar and Pescod (1995);
- (c) As proposed in the request, the value of K'_{AS} value cannot be directly related to K_{AS} in (Saqqar and Pescod, 1995), as this value is estimated after normalizing the coefficient of $F_{CBOD,O}$. Moreover the Papadopoulos *et al* (2003) suggest that the values for K_{AS} should be based on the seasonal variation taking into consideration of the climatic condition. Therefore, in the absence of long term study for K_{AS} value, the use of direct value from Saqqar and Pescod (1995) is inappropriate;
- (d) The temperature correction factor as required by Papadopoulos *et al* (2003) is not considered in the request.

References:

Colin, X, Farinet, J.L., Rojas, O. and Alazard, D. 2007, 'Anaerobic treatment of cassava starch extraction wastewater using a horizontal flow filter with bamboo as support', *Bioresource and Technology*, Vol. 9, pp. 1602-1607.

Papadopoulos, A., Parisopoulos, G., Papadopoulos, F. and Karteris, A. 2003, 'Sludge accumulation pattern in an anaerobic pond under Mediterranean climatic conditions', *Water Research*, vol. 37, no. 3, pp. 634-644.

Saqqar, M.M. and Pescod, M.B. 1995, 'Modelling sludge accumulation in anaerobic wastewater stabilization ponds', *Water Science and Technology*, vol. 31, no. 12, pp. 185-190.

Signed by the Chair, Mr. Lex de Jonge

Date: 13/08/2010

Signed by the Vice-Chair, Mr. Philip Gwage

Date: 13/08/2010

Information to be completed by the secretariat	
F-CDM-AM	AM_REV_0149
Name of the authors of the query:	TUEV Rheinland
Date when the form was received at UNFCCC secretariat	13 August 2010
Date of transmission to the EB	13 August 2010
Date of posting in the UNFCCC CDM web site	13 August 2010