



CDM: Recommendation Form for Small Scale Methodologies (version 01)
(To be used for presenting questions/proposals/amendments to the simplified methodologies for small-scale CDM project activity categories)

Date of SSC WG meeting:	30 January–02 February 2012, SSC WG 35
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification on data requirement for the measurement campaign for capacity expansion projects under AMS-III.H
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-III.H “Methane recovery in wastewater treatment”
Name of the authors of the query:	Kyoko Tochikawa / Margaret Wong Institution: Carbon Partners Asiatica kyoko.tochikawa@cp-asiatica.com , margaret.wong@cp-asiatica.com

Summary of the query:

Please use the space below to summarize the query related to SSC methodologies/categories SSC Modalities and Procedures provide recommendation/analysis of the SSC WG.

Original text from Stakeholder:

We wish to request for clarification on the data requirement for the measurement campaign for capacity addition projects under AMS-III.H. The background and clarification request are elaborated below.

1. The background

- a. The proposed CDM project involves wastewater biogas power generation (“Project”). It is the Phase II of a CDM registered large-scale project already carried out on the same premises¹.
- b. The capacity of the palm oil mill (“Mill”) has expanded since Phase I was implemented². Under the baseline, i.e. in the absence of the CDM (Phase II as well as Phase I), the lagoon volume would have been expanded proportionally with the Mill’s capacity to deal with the increase of POME flowrate to satisfy the DOE’s (Department of Environment) requirement for effluent discharge.

2. The clarification request

Reference is made to paragraph 28 (2) (a) (ii) of AMS-III.H (version 16.0), which stipulates the condition for determining the comparable existing wastewater treatment plant for the measurement campaign of capacity addition projects. The said paragraph is reproduced below for ease of reference, with the most relevant part highlighted.

(28) For Greenfield and capacity addition projects, one of the following procedures shall be used:

(a) Value obtained from a measurement campaign in a comparable existing wastewater treatment plant i.e. having similar environmental and technological circumstances for example treating similar type of

¹ For avoidance of doubt, it is clarified that Phase I and Phase II have different Project Participants. Because of this, the Phase II will be dealt with as a separate small scale project.

² It is noted that only the capacity of the equipments in the Mill has expanded, the current FFB processing amount is still limited to what is stated in the Phase I PDD. The processing amount will increase in the coming years.

wastewater. Average values from the measurement campaign shall be used and the result shall be multiplied by 0.89 to account for the uncertainty range (30% to 50%) associated with this approach. The treatment plant and wastewater source can be considered as similar as the baseline plant, whereby the measurement campaign can be implemented when following conditions can be fulfilled:

(ii) The selected plant and the baseline plants employ the same treatment technology (e.g. anaerobic lagoons or activated sludge), and the hydraulic retention times in their biological and physical treatment systems do not vary by more than 20%;

As per the above rule, capacity addition projects have to use the measurement campaign results from a comparable mill. Clarification is requested as to whether, instead of data obtained from a measurement campaign in a comparable plant, historical data from the project host mill can be used in the case which the hydraulic retention time (HRT) after the mill's capacity expansion is within the range of +/- 20% of the existing HRT, i.e. $HRT_{\text{expansion}} = (HRT_{\text{existing}} \times 0.8 \sim 1.2)$. Please refer to the following justification.

The calculation of HRT depends on the land availability for expansion. For example, there is a doubling of capacity at Plant A. The table below demonstrates cases with different land availability:

	Existing case	Expansion case		
		double land available	50% more land is available	no land is available
Lagoon volume (m ³)	1V	2V	1.5V	1V
POME flowrate (m ³ /day)	1Q	2Q		
HRT (days)	V/Q (HRT _{existing})	2V/2Q = HRT _{existing}	1.5V/2Q = 0.75HRT _{existing}	1V/2Q = 0.5HRT _{existing}

Usually, in the absence of the CDM, the doubling of capacity of a plant (Plant A) means that the lagoons must be doubled to handle the increase of POME flowrate from 1Q m³/day to 2Q m³/day to satisfy environmental regulations. So if there was 1V m³ of lagoon volume to start with, to cater for the doubled capacity, the mill needs to double the lagoon volume to 2V m³. The HRT in theory remains exactly the same before and after the capacity expansion, at V/Q days.

As per the methodology, the project owner needs to find a similar plant which must meet the condition that the HRT is V/Q +/-20%. If, for example, a similar plant Plant B is found which produces 1Q m³/day POME and has 1V m³ lagoon volume, under the current rules, it is necessary to use Plant B's data and apply an uncertainty factor of 0.89. However, this Plant B has exactly the same conditions as the Plant A before the capacity expansion. The methodology as it is now bans the use of Plant A's historical data.

Based on the above case, we wish to clarify with SSCWG whether the following approach, which we consider reasonable, are acceptable:

- i If $HRT_{\text{expansion}} = (HRT_{\text{existing}} \times 0.8 \sim 1.2)$, then own mill data³ can be used for the determination of baseline COD treatment efficiency (e.g. the 'double land available' case), in accordance with paragraph 26 & 27 of AMS-III.H.
- ii In all other cases (e.g. the '50% more land is available' and 'no land is available' case), baseline COD treatment efficiency must be sourced from other mills (via a measurement campaign) that meet the condition $HRT = (HRT_{\text{existing}} \times 0.8 \sim 1.2)$ and multiplied by an uncertainty factor of 0.89.

Such an interpretation significantly reduces the burden on a Project Participant as it avoids PPs having to try to source data from other mills, who more often do not share information that helps a rival company. Also, in that it uses its own wastewater data, we believe the approach in fact enhances the accuracy of the CER calculations.

The SSCWG's guidance on this matter will be very much appreciated.

³ In this particular example, an anaerobic digester has *already* been installed as part of the Phase I CDM activity. In such cases it would be appropriate to use not the COD removal efficiency of the most recent historical data, but the COD removal efficiency of the pre-Phase I CDM historical data.

Recommendation by the SSC WG:

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

Please refer to paragraph 34 of the meeting report of the SSC WG 35
http://cdm.unfccc.int/Panels/ssc_wg

Answer to authors of query by the SSC WG:

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

The small-scale working group of the CDM Executive Board would like to thank the author for the submission.

The SSC WG agreed to clarify that instead of data obtained from a measurement campaign in a comparable plant, it is acceptable to use the historical data from the project host plant if the hydraulic retention time (HRT) after the mill's capacity expansion is within the range of +/- 20% of the existing HRT, i.e. $HRT_{\text{expansion}} = (HRT_{\text{existing}} \times 0.8 \sim 1.2)$ when land is available for expanding the lagoon capacity.

However, since the historical data are used as a proxy for capacity expansion/Greenfield project, the uncertainty factor of 0.89 will still need to be applied in determining the baseline emissions.

Signed by the Chair, Ms. Fatou Gaye

Date: 02/02/2012

Signed by the Vice-Chair, Mr. Peer Stiansen

Date: 02/02/2012

Information to be completed by the secretariat

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