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Date: 01/03/2013

CDM Executive Board
UNFCCC Secretariat
Martin-Luther-King-Strasse 8
D-53153 Bonn
Germany
cdmregistration@unfccc.int

Subject: Response to the "CLARIFICATIONS for the request for registration of project 8453, "Co-composting of Palm Oil Mill Waste at Keratong"

Dear Members,

With reference to the request for clarification on issues related to review of the "Co-composting of Palm Oil Mill Waste at Keratong" (8453), we wish to provide the following clarification/justification for your consideration.

The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity, in accordance with paragraphs 43 to 52 of the CDM modalities and procedures;

Context:

The project activity is expected to result in a reduction in anthropogenic emissions by sources of greenhouse gases that are additional to any that would occur in the absence of the proposed project activity, in accordance with paragraphs 43 to 52 of the CDM modalities and procedures;

The baseline and monitoring methodologies comply with requirements pertaining to methodologies previously approved by the Executive Board;

Question:

1) The palm oil mill expanded its capacity from 20 ton FFB/hr to 45 ton FFB/hr, however the DOE has chosen baseline scenario, baseline alternative and baseline emission for existing capacity. The project activity has selected the baseline scenario as that in the absence of the project activity, biomass and other organic matter (waste water (POME)) are left to decay within the project boundary and methane is emitted to the atmosphere. The DOE shall substantiate how it has validated the requirements in general guidelines to SSC CDM Methodologies, Para 21 ,where in it is stated that for capacity expansion projects it shall be demonstrated that most plausible baseline scenario for the additional (incremental) capacity is the baseline provided in the respective Type II and III small-scale methodology. The demonstration should include the assessment of the alternatives of the project activity using the steps described in paragraph 19 of the guidelines. Please refer to VVM v.01.2, para 136 (b).

The DOE shall further substantiate how the requirements in the methodology are met, in particular Equation 2 in the AMS III H, Version 16, considering one year data is used to calculate baseline emission for the existing capacity, while the methodology requires

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that at least three years of data to be used. Furthermore for the capacity expansion, special provisions are included with adjustment factors in para 26, 27, 28 of the methodology, and none of them are used by the project. Please refer to VVM v.01.2, para 89. Please refer to Please refer to VVM v.01.2, para 89& 136 (b).

Justification/Clarification

The palm oil mill's operating capacity during the time of planning the CDM project activity was 20 ton/ hour and the mill had plans to increase the operating capacity to 45 ton/ hour at the time of planning the project activity itself. The project activity (co-composting project) was planned and implemented from the very beginning for the ultimate intended operating capacity of 45 ton/ hour. Thus, the proposed project activity is not a 'Capacity expansion project'. The CDM project activity is a new co-composting project; i.e. Greenfield project for the ultimate intended operating capacity of 45 ton/ hour.

In line with Paragraph 21 of 'General guidelines to SSC CDM Methodologies', a step-wise method of determination of the baseline scenario has been applied in the revised PDD. These elements have been validated in the updated validation report attached which concludes that the disposal of Empty Fruit Bunches (EFBs) in a solid waste landfill and anaerobic decomposition of Palm Oil Mill Effluent POME as in the existing situation is the baseline scenario for the disposal of EFB and POME generated from the palm oil plant of 45 ton/ hour operating capacity.

In response to the second part of the question, we kindly refer to para 26 of AMS III. H. Version 16 as under:

> *In determining baseline emissions using equation 1, historical records of at least one year prior to the project implementation shall be used.*

In validating the baseline emissions using equation, a historical one year data was used. This is in line with para 26 of AMS III. H. Version 16 which states, "In determining baseline emissions using equation 1, historical records of at least one year prior to the project implementation shall be used". Although, the $\eta_{COD,BL,I,}$ was 97.99%, a more conservative 90% COD removal efficiency has been considered which results in a conservative baseline emissions.

As a cross-check, the validation team compared with the yearly data of a similar registered CDM project activity 5825 wherein the average yearly influent COD is 72,087 mg/l and COD removal efficiency of 96.65%, The project activity with yearly average at 75,392 mg/l and actual COD removal efficiency of 97.99% compares favourably. However to be conservative, the PP have considered a COD removal efficiency of 90% which is acceptable.

The methodology does not specify to use three years data. Only when one year data is not available for a wastewater treatment that is operating for more than 3 years,

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paragraph 27 has been suggested. Paragraph 27 is not applicable for the project activity since one year data is available for the 'existing wastewater treatment plant'.

In addition, as a cross-check, the validation team applied the provisions of para 28 (2) (a) of AMS III.H. Version 16. Registered CDM project activity (PA) 7473 was selected since these are project activities wherein the industrial wastewater was being generated from processing of palm oil. The baseline treatment methodology for PA 7473 was anaerobic lagoons as in the case of the wastewater generated from Tee Teh Palm Oil mill.

Further, LRQA confirmed that the raw material is palm fresh fruit bunch and the technology employed for processing is similar to that at Tee Teh Palm Oil mill.

	COD Influent (mg/l)
PA 7473 (10-day baseline)	72031
Project activity (Yearly average)	75392

We sincerely hope the above clarification will be accepted by the Executive Board.

Ketan Deshmukh is the contact person for the review process and will address questions from the Executive Board, if any. His telephone number is +91 88790 04817and e-mail address is Ketan.Deshmukh@lr.org

Yours sincerely,

For Lloyd's Register Quality Assurance Ltd.

Archak Pattanaik
Technical Reviewer

Date : 01/03/2013

Ketan Deshmukh
Validation Team Leader

Date: 01/03/2013