
VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

Felda Palm Industries Sdn. Bhd.

**Sahabat Empty Fruit Bunch Biomass
Project**

UNFCCC Ref. No. 0288

SGS Climate Change Programme

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Date of Issue:		Project Number:	
09/12/2008		CDM.VER0131	
Project Title:			
Sahabat Empty Fruit Bunch Biomass Project			
Organisation:		Client:	
SGS United Kingdom Limited		Felda Palm Industries Sdn. Bhd.	
Subject:			
Validation Opinion for Revision of Registered Monitoring Plan			
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Name: Siddharth Yadav Date: 23-12-2008			
Revision Number:	Date:	Number of Pages:	
0	13/06/2008	11	
1	09/12/2008	11	
2	-	-	

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1. Validation Opinion

Paragraph 57 of the modalities and procedures for the CDM allow project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by "Felda Palm Industries Sdn. Bhd." to perform such a validation of the revision of monitoring plan according to the procedure detailed in annex 34 to EB 26 meeting report, the original monitoring plan is part of the PDD of registered CDM project: Sahabat Empty Fruit Bunch Biomass Project; UNFCCC ref. no. 0288. The purpose of a validation is to have an independent third party assessment of the revision of monitoring plan. In particular, the level of accuracy or completeness in the proposed revision of the monitoring plan, and the conformity with approved monitoring methodology applicable to the project activity.

By applying the proposed revision of monitoring plan as requested by the EB 35 report paragraph 85c, the parameter of EFB consumed has been removed from the registered PDD monitoring plan and would not be monitored. As per the methodology followed AMS I C version 7; the EFB consumed is not required to be monitored. Thus the revision of the same does not affect the emission reduction calculations. The Total quantity of EFB available in the region (L_{efb}) would be monitored based on the official sources from the ratio of FFB to EFB. Also the total quantity of EFB utilized in the region (LU_{efb}) would be monitored to assess the surplus availability of biomass in the region. The Parameter of "Total electricity generated (E_{TG})" and "Electricity Consumed ($E_{Parasitic}$)" has been added while the parameter of "Net electricity (E_{NG})" would now be calculated rather than measured as per the revised monitoring plan, the said change would not have any impact of the emission reduction calculations. The parameter of "Steam delivered (Q_y)" would now be calculated in GJ/day rather than GJ/hr calculated earlier while the parameter of "Steam generated (S)" would be measured in tonnes rather than tonnes/hr calculated earlier. By doing the same the energy content of the steam remains the same and there is no effect on the emission reductions. The parameter of "Project Diesel consumption during maintenance" would be measured by use of an analog flow meter. This can be cross-checked with the total diesel consumption at site which is measured by use of a ruler (dip stick) that is inserted into the calibrated tank. The conservative value will be used for project emission calculations.

Theoretically, there should be no impact on the calculation of the emissions reduction achieved by this project activity because the revision is aiming to address the improvement in monitoring procedure which does not have any effect on emission reductions.

Furthermore, we confirm that:

- (a) the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions;
- (b) the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity
- (c) This is the second verification for the said project activity. During first verification; EFB consumed was not monitored and the same was acceptable to the Executive Board.

Signed on Behalf of the Validation Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 23-12-2008

2. Introduction

2.1 Objective

Paragraph 57 of the modalities and procedures for the CDM allow project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by “Felda Palm Industries Sdn. Bhd.” to perform such a validation of the revision of monitoring plan according to the procedure detailed in annex 34 to EB 26 meeting report, the original monitoring plan is part of the PDD of registered CDM project: Sahabat Empty Fruit Bunch Biomass Project; UNFCCC ref. no. 0288. The purpose of a validation is to have an independent third party assessment of the revision of monitoring plan. In particular, the level of accuracy or completeness in the proposed revision of the monitoring plan, and the conformity with the approved monitoring methodology applicable to the project activity.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed of the project design documentation, using a risk based approach and conducted follow-up interviews.

2.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

2.3 GHG Project Description

As per <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95> web-page validation report dated 28-02-2006. The project was registered on 23rd April 2006 with reference number 0288. The first verification for the project activity covering period from 1st January 2006 to 31st January 2007 and CER's are issued on 17th March 2008.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Vikrant Badve	Lead Assessor	SGS India
Jimmy Sah	Assessor	SGS India

3. Methodology

3.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline.

3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Ref ID	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

3.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A CAR is issued, where:

- mistakes have been made with a direct influence on project results;
- validation protocol requirements have not been met; or
- there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

Observations may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (AnnexA.2). In this form, the Project Developer is given the opportunity to “close” outstanding CARs and respond to NIRs and Observations.

3.4 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

4. Validation Findings

4.1 Participation Requirements

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.2 Project Design

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.3 Eligibility as a Small Scale Project

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.4 Baseline Selection and Additionality

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.5 Application of Baseline Methodology and Calculation of Emission Factors

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.6 Application of Monitoring Methodology and Monitoring Plan

The project activity is using AMS I C version 07. The need of revision of monitoring plan is requested by EB 35 report paragraph 85c. As per the methodology the EFB quantity is not required to be monitored thus the monitoring plan is revised. The surplus availability of biomass in the region is established by the assessment of the Total quantity of EFB available in the region (L_{efb}) which would be monitored based on the official sources from the ratio of FFB to EFB. Also the total quantity of EFB utilized in the region (LU_{efb}) would be monitored, thus the surplus biomass availability can be assessed to meet the requirement of EB28 Annex 35 paragraph 18. The Parameter of "Total electricity generated (ETG)" and "Electricity Consumed (EParasitic)" has been added while the parameter of "Net electricity (ENG)" would now be calculated rather than measured as per the revised monitoring plan, the said change would not have any impact of the emission reduction calculations. The parameter of "Steam delivered (Qy)" would now be calculated in GJ/day rather than GJ/hr calculated earlier while the parameter of "Steam generated (S)" would be measured in tonnes rather than tonnes/hr calculated earlier. By doing the same the energy content of the steam remains the same and there is no effect on the emission reductions. The steam generated (S) will be measured at export line to the process plant after extraction from the turbine. There is no condensate return from the process plant back to the power plant. The parameter of "Project Diesel consumption during maintenance" would be measured by the analog flow meter. This Italian meter is printed with the statement that this is not required to be calibrated. The reason for this is that it has been sold as a flow meter for fuel, but strictly not for commercial purposes (hence the note 'Not to calibrate' displayed on the front). If it were for commercial sale of the fuel, periodic calibrations would have been required by an external organization with suitable accreditations. The site would be able to carry out some basic tests with a known volume of liquid to ensure their equipment is reliable. However, this is not possible by an external lab to recognized flow meter calibration standards.

When supplied initially the meter would have had factory tested by the manufacturer. Since then, due to the instructions on the front it has not been calibrated.

Hence, the diesel consumption measured by this meter will be cross-checked with the total diesel consumption at site which is measured by the use of a ruler that is inserted into the calibrated tank. The tank would be calibrated as per requirements described under EB 35 annex 35 i.e at least once in three years and PP will follow the clarification available on <http://cdm.unfccc.int/methodologies/PAMethodologies/ClarificationsTools/Tools/0004/Clarification/H75W332L84VTSEB6P662DNCZVI2WE5> to regarding the technique used for calibration. In cases of any mismatch the conservative values between the two would be considered. Rest of the monitoring plan remains the same as mentioned in the registered PDD mentioned on UNFCCC website <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> and revised monitoring plan is attached with this revised validation opinion.

There is no other change in the validation report available on UNFCCC website <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>.

4.7 Choice of the Crediting Period

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.8 Environmental Impacts

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

4.9 Local Stakeholder Comments

As per <http://cdm.unfccc.int/UserManagement/FileStorage/FAPKOS4AZBRD7W1GPJWMVE1UK9BVJ9> validation report dated 28-02-2006 available on UNFCCC website <http://cdm.unfccc.int/Projects/DB/SGS-UKL1141127479.95>. No Change.

5. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
29/04/2008	Nina Zetsche	Principal CDM Project Manager, EcoSecurities	Monitoring practice adopted at plant site and requirement under regd. PDD monitoring plan
29/04/2008	Tan Wai Han	Project Manager, EcoSecurities	Monitoring practice adopted at plant site and requirement under regd. PDD monitoring plan

6. Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ Revised Monitoring Plan, dated 09/12/2008
- /2/ Registered PDD for "Sahabat Empty Fruit Bunch Biomass Project" UN number 0288
- /3/ AMS I C version 7

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