VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

Chemplast Sanmar Limited

Supply side energy efficiency improvements in steam generation at CSL

UNFCCC Ref. No. 0706

SGS Climate Change Programme
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02/12/2008			CDM.VER 0489
Project Title:			
Supply side energy efficiency improvement in steam generation at CSL			
Organisation:			**Client:**
SGS United Kingdom Limited			Chemplast Sanmar Limited
Subject:			
Validation opinion for revision of Registered Monitoring Plan			
Validation Team:			
Kaviraj Singh - Lead Assessor Ashok K. Gautam - Assessor Vivek K. Ahirwar - Local Assessor (Trainee)			☒ No Distribution (without permission from the Client or responsible organisational unit)
Technical Review:	**Trainee Technical Reviewer:**		
Date: 07-12-2008 Name: Sanjeev Kumar	Name: Ajoy Gupta		☐ Limited Distribution
Authorised Signatory:			
Name: Siddharth Yadav Date: 07-12-2008			☐ Unrestricted Distribution
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Abbreviations

CAR	Corrective Action Request
CSL	Chemplast Sanmar Limited
CDM	Clean Development Mechanism
COP/MOP	Conference of parties serving as the meeting of parties to Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
GHG	Green House Gas(es)
MP	Monitoring Plan
NIR	New Information Request
PDD	Project Design Document
PP	Project Proponent
UNFCCC	United Nations Framework Convention on Climate Change

Table of Content

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 Chemplast Sanmar Limited (hereafter CSL) 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: Supply side energy efficiency improvement in steam generation at CSL and UNFCCC No. 0706. 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, there will not be any effect on the emission reduction calculation. Insertion of steam temperature, pressure and enthalpy on the revised monitoring plan will only make the ER calculation more transparent.

This revision improves the accuracy of information provided and consistency in registered PDD and the monitoring plan.

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) the project activity is undergoing first verification.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: 

Name: Siddharth Yadav

Date: 07-12-2008

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 CSL 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: Supply side energy efficiency improvement in steam generation at CSL, UNFCCC no 0706. 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/DNV-CUK1160747027.53/view web page there is no change in the project activity description. The project was registered on 17th November 2006 under UNFCCC reference number 0706.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Kaviraj Singh	Lead Assessor	SGS IN
Ashok K. Gautam	Assessor	SGS IN
Vivek Kumar Ahirwar	Local Assessor (Trainee)	SGS IN

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. Therefore, a site visit was undertaken on 25/02/2008.

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:

I. mistakes have been made with a direct influence on project results;
II. validation protocol requirements have not been met; or
III. 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. 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 the Validation Report by Det Norske Veritas Certification Limited (hereafter DNV) dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0X No Change.

4.2 Project Design

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0X No Change.

4.3 Eligibility as a Small Scale Project

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0X No Change.

4.4 Baseline Selection and Additionality

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0XNo Change.

4.5 Application of Baseline Methodology and Calculation of Emission Factors

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0XNo Change.

4.6 Application of Monitoring Methodology and Monitoring Plan

SGS has performed a validation of the revision in monitoring plan for registered project "Supply side energy efficiency improvement in steam generation at CSL'' UNFCCC reference number 0706. The validation was performed on the basis of the UNFCCC criterion which is detailed in Annex 34 to EB 26 meeting report.

Prior to the validation of this revision in monitoring plan SGS has requested a clarification (SSC_203) on the issue that the method of emission reduction calculation of registered PDD (UNFCCC ref. 0706) is correctly following the applicable methodology AMS IIB, version 07. In response to this clarification SSCWG recommended (F-CDM-SSCwg ver 01 SSC_203) that a revision of monitoring plan may be requested to demonstrate using measured values that the enthalpy of the steam produced in the project activity boiler is always equal or higher than the enthalpy of the steam produced in the baseline fossil fuel boiler (e.g. by monitoring pressure and temperature values in addition to steam flow). Therefore, the registered monitoring plan of the PDD has been revised for the inclusion of the following parameters in the project activity (WHR Boiler).

- Pressure of steam in kg/cm^2 (P_{steam}),
- Temperature of steam in °C (T_{steam})
- Enthalpy of steam generated in kcal/kg (E_{steam}).

Pressure and temperature of steam will be monitored (directly measured using appropriate sensors/probes) on daily basis and Enthalpy of steam will be calculated based on monitored values of steam temperature and pressure on monthly frequency. The newly added parameters will not be used in the emission reduction calculations, however, based on the monitored parameters the enthalpy of the steam generated in the project activity boiler will be determined. This calculated enthalpy can be used to cross check with the enthalpy of steam produced from the baseline fuel boiler.

The above said changes in the revised monitoring plan will bring more clarity (for comparing the enthalpy of project boiler and baseline boiler) and will not effect the emission reduction calculations.

Rest of the monitoring plan remains the same as mentioned in the registered PDD available at UNFCCC website http://cdm.unfccc.int/UserManagement/FileStorage/SUXEEBWJ9SJ8RVAW5X3YRWGH79WTQH and revised monitoring plan is attached with the revised validation opinion.

There is no other change in the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0X

This revision improves the accuracy of information provided and consistency in registered PDD and the monitoring plan.

4.7 Choice of the Crediting Period

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0X No Change.

4.8 Environmental Impacts

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0XNo Change.

4.9 Local Stakeholder Comments

As per the Validation Report by DNV, dated 25th September 2006 available on UNFCCC webpage http://cdm.unfccc.int/UserManagement/FileStorage/BGXAO1BJWK35UF28U0JVGOA84MQR0XNo Change.

5. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
25/02/2008	Mr. S Venkatesan	GM. CSL	Monitoring plan
25/02/2008	Mr. S Venkatragahvan	AGM, CSL	Monitoring plan
25/02/2008	Mr. Vishal Kumar	Consultant	QA/QC

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 1st November 2008

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

/2/ Registered PDD version 02 dated 20th September 2006
/3/ Validation Report, 25th September 2006
/4/ Methodology AMS IIB version 07

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