

VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

Triveni Engineering and Industries Ltd

**Deoband Bagasse based Co-
generation Power Project**

UNFCCC Ref. No. 0578

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| Organisation: | | Client: | |
| SGS United Kingdom Limited | | Triveni Engineering and Industries Ltd | |
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| Subject: | | | |
| Validation opinion for revision of Registered Monitoring Plan | | | |
| Validation Team: | | | |
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| Authorised Signatory: | | <input type="checkbox"/> Unrestricted Distribution | |
|  Name: Siddharth Yadav Date: 12/02/2009 | | | |
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Abbreviations

| | |
|---------|---|
| BE | Baseline Emissions |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CEA | Central Electricity Authority |
| CER | Certified Emission Reduction |
| DOE | Designated Operational Entity |
| ER | Emission Reduction |
| IPCC | Intergovernmental Panel on Climate Change |
| kWh | Kilo Watt hour |
| MP | Monitoring Plan |
| MR | Monitoring Report |
| MT | Metric Tonne |
| MW | Mega Watt |
| MWh | Mega Watt hour |
| NIR | New Information Request |
| PDD | Project Design document |
| PE | Project Emissions |
| PPA | Power Purchase Agreement |
| PP | Project participant |
| QA / QC | Quality Assurance / Quality Control |
| UNFCCC | United Nations Framework Convention on Climate Change |

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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 Triveni Engineering and Industries Ltd. 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: Deoband Bagasse based Co-generation Power Project UNFCCC no. 0578. 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, "Net quantity of electricity generated in the project plant" will be calculated by subtracting the auxiliary consumption from the gross electricity generation, both the gross electricity generation and auxiliary electricity consumption are duly measured separately through energy meters. The energy meters of auxiliary consumption and gross electricity generation will be calibrated periodically as mentioned in the registered PDD. However, as per the monitoring methodology ACM0006 version 03, "Net quantity of electricity generated in the project plant" should be measured but as per 'General Guidance for all scenarios' on page 28; the methodology itself mentions "*In determining the net quantities of electricity generation or the net efficiency of the electricity generation, project participants shall subtract the quantity of electricity required for the operation of the power plant (in both baseline and project cases)*" Thus 'Net quantity of electricity generated' parameter can be calculated as mentioned in revised monitoring plan. Hence the revision in monitoring plan is proposed.

The parameter "Average net Energy efficiency of heat generation in the boiler that is operated next to the project plant" will be calculated now in the revised monitoring plan while the same was mentioned as measured in the registered PDD to be in compliance with the monitoring methodology. However as per 'General Guidance for all scenarios' on page 33; the methodology itself mentions that this parameter can be calculated, the direct measurement of this parameter is not possible in present case and hence the revision in monitoring plan is proposed for this parameter.

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 finding of previous verifications reports have been taken into account.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: 

Name: Siddharth Yadav

Date: 12/02/2009

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 Triveni Engineering and Industries Ltd. 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: Deoband Bagasse based Co-generation Power Project UNFCCC no. 0578. 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 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/TUEV-SUED1156433275.07/view> web page there is no change in the project activity description. The project was registered on 3rd November 2006 under UNFCCC reference number 0578.

2.4 The Names and Roles of the Validation Team Members

| Name | Role | Affiliate |
|----------------|---------------|-----------|
| Nikunj Agarwal | Lead 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:

- 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 TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.2 Project Design

As per the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.3 Eligibility as a Small Scale Project

As per the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.4 Baseline Selection and Additionality

As per the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.5 Application of Baseline Methodology and Calculation of Emission Factors

As per the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.6 Application of Monitoring Methodology and Monitoring Plan

By applying the proposed revision of monitoring plan, "Net quantity of electricity generated in the project plant" will be calculated now by subtracting the auxiliary consumption from the gross electricity generation, both the gross electricity generation and auxiliary electricity consumption are duly measured separately through energy meters. The energy meters of auxiliary consumption and gross electricity generation will be calibrated periodically as mentioned in the registered PDD. However as per the monitoring methodology ACM0006 version 03, "Net quantity of electricity generated in the project plant" should be measured but as per 'General Guidance for all scenarios' on page 28; the methodology itself mentions "*In determining the net quantities of electricity generation or the net efficiency of the electricity generation, project participants shall subtract the quantity of electricity required for the operation of the power plant (in both baseline and project cases)*" Thus 'Net quantity of electricity generated' parameter can be calculated as mentioned in revised monitoring plan. Hence the revision in monitoring plan is proposed.

The parameter "Average net Energy efficiency of heat generation in the boiler that is operated next to the project plant" will be calculated now in the revised monitoring plan while the same was mentioned as measured in the registered PDD to be in compliance with the monitoring methodology. However as per 'General Guidance for all scenarios' on page 33; the methodology itself mentions that this parameter can be calculated, the direct measurement of this parameter is not possible in present case and hence the revision in monitoring plan is proposed for this parameter.

The revised monitoring plan was checked during the site visit and same was found inline with the monitoring practice adopted by the project proponent.

Rest of the monitoring plan remains the same as mentioned in the registered PDD available at UNFCCC website <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> and revised monitoring plan is attached with the revised validation opinion.

There is no other change in the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> .

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 TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.8 Environmental Impacts

As per the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change.

4.9 Local Stakeholder Comments

As per the Validation Report by TÜV SÜD Industrie Service GmbH, dated 23rd August 2006 available on UNFCCC webpage <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1156433275.07/view> No Change

5. List of Persons Interviewed

| Date | Name | Position | Short Description of Subject Discussed |
|-------------|--------------------|--|--|
| 23/05/2008 | Mr. Ashish Awasthi | Dy. General Manager - Coordination | Monitoring practice adopted at plant site and requirement under registered PDD monitoring plan |
| 23/05/2008 | Mr. Vipin Jindal | Additional Manager | Monitoring practice adopted at plant site |
| 23/05/2008 | Mr. Rahul Garg | Sr. Consultant | Monitoring practice adopted at plant site and requirement under registered 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 21st January 2009

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 04 dated 1st August 2006

/3/ Validation Report, dated 23rd August 2006

/4/ Methodology ACM0006 version 03

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