



CDM Verification and Certification Report

for

Shri Bajrang WHR CDM Project

Project Ref. No. 0528

Period:

1st September 2006 to 31st May 2007

CDM.VER0171rev.1
Date: 5 September 2007

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Verification and Certification Report of Bajrang WHR Project

Summary

- 1.1 SGS United Kingdom Ltd has verified the implementation of the monitoring plan in the registered project number 0528 and the application of the monitoring methodology ACM0004 version 2: Consolidated monitoring methodology for waste gas and/or heat for power generation.
- 1.2 This report presents the results of the second periodic verification assessment. A site visit was carried out on 26th June 2007 to verify the data collected during the period: 1st September, 2006 to 31st May, 2007.

2 Introduction

SGS United Kingdom Ltd was contracted by **Shri Bajrang Power & Ispat Limited** to perform the second periodic verification of 'Shri Bajrang WHR CDM project. This report covers the monitoring period from 1st September, 2006 to 31st May, 2007. This report presents the findings of the second assessment and provides justification for the verification process and the verification and certification opinion.

3 Objectives

The purposes of this verification exercise are, by review of objective evidence, to establish that:

- The emissions report conforms with the requirements of the monitoring plan in the registered PDD and the approved methodology; and
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

4 Scope

This engagement covers verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the 'Shri Bajrang WHR CDM Project' (registered with ref no. 0528) during the period from 1st September, 2006 to 31st May, 2007.

5 Verification Team

Team leader / Lead Assessor: Pankaj Mohan

Assessor: Syed Khursheed Zaidi

Technical reviewer: Siddharth Yadav

6 Itinerary

The lead assessor Mr. Pankaj Mohan performed a site visit on 26th June 2007 for second verification. The site visit was used to review records held at the project office (e.g. procedural manuals; monitoring records), interview staff, review procedures and the implementation of these procedures, , checked the meters installed, confirm data collection and handling procedures and verify emission reductions. Additional time was spent offsite for document and records review.

7 Verification process

7.1 Summary

The verification process is a two-stage process.

In the first stage, SGS completed a strategic review and risk assessment of projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

At the end of this stage, SGS produced:

- A Periodic Verification Checklist which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the periodic verification protocol.
- Corrective Action Requests and New Information Requests, if necessary.

In the second stage, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question, using the Periodic Verification Checklist. This involved site visit and a desk review of the monitoring report.

At the end of this stage, SGS produced this verification report which will form the basis of any future requests to the CDM EB.

8 Results

Assessment against the provisions of Decision 17/CP.7:

Is the project documentation in accordance with the requirements of the registered PDD and relevant provision of decision 17/CP.7, EB decisions and guidance and the COP/MOP?

Yes, the project is in accordance with the requirement of the registered PDD.

Have on-site inspections been performed that may comprise, *inter alia*, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observations of established practices and testing of the accuracy of monitoring equipment?

Yes, the on-site inspections have been performed by Lead Assessor Mr. Pankaj Mohan on 26th June 2007. The project boundary along with all the meters installed earlier and their calibration records were checked again. It was noticed that some new meters were installed. The data for this monitoring period was checked from old meters as the new meters were installed in May 2007 and do not affect the data reported for the current monitoring period i.e 1st September 2006 to 31st May 2007. At present, new and old meters are installed in parallel. The monitored data was also checked from the log sheets

maintained at the plant. The results of the site visit are recorded in the verification checklist which is used as an internal report only. The evidences have been collected for the same.

Has data from additional sources been used? If yes, please detail the source and significance.

Yes, the grid emission factor has been used as an additional source of information. The emission factor was calculated on the basis of CEA (Central electricity authority) data which is published by Ministry of power, government of India. However, the grid emission factor was calculated ex-ante and fixed for the entire crediting period.

The emission factor of fossil fuel used was also checked and it was found to be satisfactory. The value of NCVi was also checked from IPCC.

Please review the monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent.

The aspects of the monitoring plan were implemented correctly. The supporting references and data were complete and transparent. The emission reduction calculation has been checked and CAR/NIRs were raised for more clarification and corrections and the report was used as an internal report only. The same was found incorporated in revised monitoring report.

CAR1 was raised to get the clarification on the data of electricity generation and auxiliary consumption along with net electricity generation was not matching with the monitoring report and spread sheet provided by the project proponent. The project proponent replied by providing the clarification that for the auxiliary consumption all the auxiliary data including the sponge iron plant was also provided instead of only power plant auxiliary. For the electricity generation data, the data recorded in spreadsheet from the log books were wrongly entered due to which it was not matching. The mistakes have been rectified in revised monitoring report and spread sheet.. This was checked at the site visit by the lead assessor and verified the correct values and obtained the copies of log sheets for generation data as well DCS printout for auxiliary consumption. The daily records for the period from 1st September 2006 to 31st May 2007 were checked and then it was accepted. The revised monitoring report version 2 and revised spreadsheet has also been checked and found that these are matching with the records checked and hence CAR1 closed out.

CAR2 was raised to get the clarification on the new meters installed at the site which were not present at the first verification and this change was not mentioned in the monitoring report. The project proponent replied by providing the justification that the new meters are installed to strengthen the data recording and quality of data from the DCS. This does not alter the CER calculations. This was checked during the site visit and concluded that it has done to strengthen the data quality and quantity from the DCS. The calibration certificates for old & new meters were obtained as proof for the same. This change was accepted after checking that it has not tempered with project boundary of registered PDD and not affecting the CER calculations. During this monitoring period data was used from old meters as the new meters are

installed in May 2007 only. This was accepted and hence CAR2 was closed out.

CAR3 was raised for increase in CER value from 66138.5 tCO₂ in first monitoring report to 66885.32 tCO₂ in revised monitoring report. The project proponent replied that this has happened due to decrease in Auxiliary consumption which was wrongly reported during first monitoring report. This was accepted after verifying the auxiliary consumption data during site visit. Even the electricity generation data was also decreased but on the lower side as compared to auxiliary consumption data. So the CER got increased from the reported earlier in the monitoring report. Now the revised monitoring report mentions the revised CER value which was verified during site visit. Hence CAR3 was closed.

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant? If yes, please detail.

No, the plant has already implemented correct monitoring methodology and following the same in the second monitoring period.

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information using calculation procedures consistent with those contained in the registered project design document and the monitoring plan.

*The data used in anthropogenic emission reduction calculation is consistent with those contained in the registered PDD. The estimated emission reduction in the registered PDD was **70844.25** tCO₂ for the first nine months of second monitoring period as per estimation made in the PDD. The actual emission reduction has been verified as **66885.32** tCO₂ for the same period.*

Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project design document. Project participants shall address the concerns and supply relevant additional information.

No concerns were identified.

Post monitoring report on UNFCCC website

Yes, the monitoring report is available at ref. no 0528 on UNFCCC website <http://cdm.unfccc.int/Issuance/MonitoringReports>

8.1 Confirmation of data verified

Reporting period: 1st September 2006 to 31st May 2007

Monitoring period	PDD estimated value	Reported value	Verified value
1 st September 2006 to 31 st May 2007	70844.25	66138.5	66885.32

9 Conclusion on data quality and decision on materiality

Compliance:

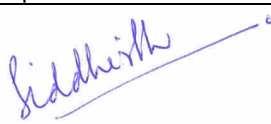
Considering that the monitoring report is considered in compliance with the approved monitoring methodology and with the registered Project Design Document.

Data:

The data presented in the revised monitoring report and the emission reductions determined from that data are considered to be complete, transparent and free of material error or omission.

10 Recommendation

The Verification Lead Assessor recommends that SGS United Kingdom Ltd issue a verification and certification opinion.

Name and reference number of project	Shri Bajrang WHR CDM Project UNFCCC Ref. No. 0528 SGS Ref. No. CDM.VER0171
Scope of Verification	This scope of this engagement covers the verification and certification of greenhouse gas emission reductions in accordance with section I of Decision 17/CP.7, and relevant decisions of the CDM EB and COP/MOP.
Total GHG emission reductions verified	66885.32 tCO ₂ e
Registered PDD and Approved Methodology used for Verification	Registered PDD with ref. no.0528 and approved consolidated methodology ACM0004 version 02.
Verification Opinion with regard to data quality and materiality	The data are considered to be complete, transparent and free of material error or omission.
Applicable period	1 st September 2006 to 31 st May 2007
Dated and signed on behalf of the verification body by authorized signatory	 05-09-2007, Siddharth Yadav

Annexs:

Key reference documents:

- Registered PDD for 0528 project
- ACM0004 version 02
- Monitoring Report version 2 dated 10th July 2007.

Other documents provided by the Client:

References and its significance:

Annex	Document
1	CECB Consent
2	Monthly Fossil fuel consumption
3	Monthly Electricity generation, Auxiliary consumption and Net electricity generation.
4	Monthly emission reductions calculation excel sheet
5	Calibration certificates of Total Electricity generation measuring instruments for 8MW TG are 4223185 (Old one) & 120445/20104 – 1707 (New meter).
6	Calibration certificates of Total Electricity generation measuring instruments for 10 MW TG are 4252691 (Old one) & 120445/20111 – 1707 (New meter).
7	Calibration certificates of Power plant auxiliaries measuring instruments used in monitoring. Old meters serial numbers 58379/122-3904, 58379/123-3904. New meters serial numbers 120445/20098-1707, 120445/20115-1707.