VERIFICATION AND CERTIFICATION REPORT

Kalyani Steels Limited

Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India.

SGS Climate Change Programme
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Date of Issue:	**Project Number:**
16-12-2008	CDM.VER0058
Project Title:	
Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India.	
Organisation:	**Client:**
SGS United Kingdom Limited	Kalyani Steels Limited
Publication of Monitoring Report:	
Monitoring Period:	1st January 2007 to 31st December 2007
First Monitoring Report Version and Date:	Version 01 dated 11th February 2008
Final Monitoring Report Version and Date:	Version 04 dated 10th June 2008

Summary:

SGS United Kingdom Ltd has performed the third verification of the CDM project Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India with UNFCCC Reference number 0427. The verification includes confirming the implementation of the monitoring plan of the registered PDD with UNFCCC Reference number 0427and the application of the monitoring methodology as per ACM0004 version 02, dated 3rd March 2006. A site visit was conducted to verify the data submitted in the monitoring report.

KSL operate two numbers of Mini- Blast Furnaces for iron making process. Operation of Blast Furnaces results the generation of flue gases having significant amount of thermal energy as waste heat. Plant uses a part of this waste heat for air preheating & remaining is used in waste heat recovery boiler for production of steam after auxiliary firing of the gases to increase the heat content that facilitate generation of electricity. The energy obtained from the expansion of the steam in the steam turbine is utilized to generate electrical power which is used for in- house consumption.

SGS confirms that the project is implemented in accordance with the validated and registered Project Design Document. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in **68135** tCO2e during period 01/01/2007 to 31/12/2007.

Subject:			
CDM Verification			
Verification Team:			
Vikrant Badve – Lead Assessor Manish Kumar Dabkara – Local Assessor (Trainee)			☒ No Distribution (without permission from the Client or responsible organisational unit)
Technical Review:	**Trainee Technical Reviewer:**		
Date: 28-05-2008, 09-11-2008, 19-12-2008 Name: Sanjeev Kumar	Name: N/A		☐ Limited Distribution
Authorised Signatory:			
Name: Siddharth Yadav Date: 19-12-2008			☐ Unrestricted Distribution
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0	09-05-2008	15	
1	05-11-2008	15	
2	16-12-2008	17	

Abbreviations

ACM	Approved Consolidated Methodology
BEF	Baseline Emission Factor
BM	Build Margin
BTU	British Thermal Unit
CAR	Corrective Action Request
CO2	Carbon Dioxide
CER	Carbon Emission Reductions
CDM	Clean Development Mechanism
CM	Combined Margin
DCS	Digital Control System
EF	Emission Factor
FO	Furnace Oil
GHG	Greenhouse Gas
ISO	International Standards Organization
KSL	Kalyani Steels Limited
KW	Kilowatt
MR	Monitoring Report
MW	Mega watt
NCV	Net Calorific Value
OM	Operating Margin
PLC	Programmable Logic Controller
UNFCCC	United Nations Framework Convention on Climate Change

Table of Content

1. Introduction

1.1 Objective

SGS United Kingdom Ltd has been contracted by Kalyani Steels Limited to perform an independent verification of its CDM project Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India. CDM projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Certified Emission Reductions (CERs).

The objectives 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 complete and transparent.

1.2 Scope

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on the validated and registered project design document and the monitoring report. The project is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

SGS has, based on the recommendations in the Validation and Verification Manual, employed a risk-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

The verification 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.

1.3 Project Activity and Period Covered

This engagement covers emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the following project and period.

Title of Project Activity:	Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India.
UNFCCC Registration Number:	0427
Monitoring Period Covered in this Report	01/01/2007 to 31/12/2007
Project Participants	Kalyani Steels Limited
Location of the Project Activity:	Ginigera, Koppal district in Karnataka state of India.

For the Iron production process Kalyani Steel Limited operates Mini- Blast Furnaces. The blast flue gases from the blast furnaces take significant amount of heat with them. This waste heat is then utilized by plant for air preheating & steam production through waste heat recovery boiler after firing furnace oil for additional heat which facilitates power production. Energy of steam is then used for production of Electrical Power with the help of Steam Turbine – Alternator Set. The technology involves fully PLC controlled state of the art equipment and control systems.

2. Methodology

2.1 General Approach

SGS's approach to the verification is a two-stage process.

In the first stage, SGS completed a strategic review and risk assessment of the 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 if relevant;
- 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 verification approach and the sampling plan.

Using the Periodic Verification checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and a desk review of the monitoring report. This verification report describes the findings of this assessment.

2.2 Verification Team for this Assessment

Name	Role	SGS Office
Vikrant Badve	Lead Assessor	SGS India
Manish Kumar Dabkara	Local Assessor (Trainee)	SGS India

2.3 Means of Verification

2.3.1 Review of Documentation

The validated PDD, the monitoring report submitted by the client and additional background documents related to the project performance were reviewed. A complete list of all documents reviewed is attached in section 8 of this report.

2.3.2 Site Visits

As part of the verification, the following on-site inspections have been performed

Location: Ginigera, Koppal district in Karnataka state of India	
Date: 11/03/2008 & 12/03/2008	
Coverage:	**Source of Information / Persons Interviewed**
Review of performance records i.e. plant log books maintained at Site for monitoring parameters, calibration records, interview with project participant and daily monitoring practice adopted at site.	Mr. Tarit Roy
	Mr. S.S. Kumbhar
	Mr. Giridar
	Mr. Asif Masood

2.4 Reporting of Findings

As an outcome of the verification 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 team shall raise a New Information Request (NIR) specifying what additional information is required.

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

I. the verification is not able to obtain sufficient evidence for the reported emission reductions or part of the reported emission reductions. In this case these emission reductions shall not be verified and certified;

II. the verification has identified misstatements in the reported emission reductions. Emission reductions with misstatements shall be discounted based on the verifiers ex-post determination of the achieved emission reductions

The verification 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 actors. These have no impact upon the completion of the verification activity.

Corrective Action Requests and New Information Requests are detailed in Periodic Verification Checklist. The Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

2.5 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.

3. Verification Findings

3.1 Project Documentation and Compliance with the Registered PDD

The project got registered as a CDM project on 29th September 2006 (/01/). The project is in compliance with the registered PDD (/02/). This is the third periodic verification for the project activity for the monitoring period from 1st January 2007 to 31st December 2007. The project is registered against the approved methodology ACM0004, version 2 dated 03 March 2006 (/06/) and the monitoring report is in compliance with the monitoring methodology. The project boundary is in compliance with the registered PDD.

In the registered PDD (/02/) it was estimated that project activity would results in emission reduction of 62958 tCO2e per year during the crediting period while actual emission reductions are more than estimated (/03/). CAR 6 was raised for the same. In response to CAR 6 the project proponent clarified that increase in emission reduction is due to the fact that power plant is now more stabilized resulting lesser breakdown & ultimately supply constant BF flue gases. Also project emissions due to furnace oil consumption used for firing to blast furnace flue gases, auxiliary power consumption have been reduced and hence the project activity performed efficiently. CAR 6 was closed out.

3.2 Monitoring Results

The parameter **Quantity of furnace oil (auxiliary fuel) used by project activity** is recorded on continuous basis using an on-line meter. The readings are taken by plant personnel and recorded in a log book (/09/). The log books were cross checked against the reported value.

FO is used for firing to flue gases to increase their heat content to facilitate power generation. During the site visit mismatch was observed for Furnace Oil consumption between data provided in the excel sheet of monitoring report version 01 (/07/) & plant log book (/09/) data for following dates 21st Jan,11th April, 26th June, 19th July, 10th Aug, 17th Sept, 15th Oct,16th Oct, 17th Oct, 24th Oct and 13th Nov. 2007 , while for 13th Jan, 18th Jan and 3rd July 2007 FO consumption data was found missing in the log book but for the same time, data on these dates was available in the monitoring report version 01. Value for FO density (/13/) used in emission reduction calculation sheet was not correct. CAR 1 was raised for the same. In response to CAR 1 project proponent corrected the data mismatch observed for 21st Jan,11th April, 26th June, 19th July, 10th Aug, 17th Sept, 15th Oct,16th Oct, 17th Oct, 24th Oct and 13th Nov. 2007. The data mismatch was found because of the rounding off error; earlier PP has not considered the decimal points but in response to CAR 1 PP considered the decimal places and mentioned the conservative value of FO consumption. PP also clarified that the data for 3 days i.e. 13th Jan, 18th Jan and 3rd July 2007was not missing but as there is break down in plant the consumption on these days were recorded in break down maintenance log sheet (/09/). Thus break down maintenance log book and plant log book was verified for the FO consumption data mentioned in monitoring report version 3 (/04/) and same is found acceptable. Project proponent had imparted training to plant personnel. The CAR 1 was closed out.

In the monitoring report version 01 various details like tag number, serial number, calibration details regarding monitoring equipments were not mentioned. NIR 2 was raised for the same. In response to NIR 2 project proponent included same details in monitoring report version 3 and the NIR 2 was closed out.

The parameters **Total Electricity Generated & Auxiliary Electricity** consumption is recorded with the help of energy meters. The PLC in the DCS measures the total power generation from the power plant (/05/). The data was recorded in the DCS on hourly basis. The power in-charge checks the power generated at end of the day. The difference in the days reading taken at 6:00 hrs of the day with that of the next day is the days total power generation from the power plant (/14/).

During the site visit mismatch for Auxiliary power consumption values as mentioned in plant records (/14/) and excel sheet (/07/) for the monitoring period was observed .CAR 4 was raised. In response to CAR 4 project proponent replied that it was due to typographical error which was corrected in MR version 3 (/08/).CAR 4 was closed out.

The parameter **Net Electricity supplied to KSL facility** is calculated from the difference in total power generation and auxiliary consumption (/02/). The reported values were checked with the log book records (/14/) and were found ok after closure of CAR 4.

The parameter **Quantity of LPG used in CPP** is recorded in plant log book which can be cross checked with Stores Requisition Slip (/12/). The reported values were checked with the log book records and were found ok.

During document review it was found that equation used for baseline emission calculation was not correct , also values used in monitoring report version 1 (/03/) for emission reductions was not consistent. CAR 5 was raised. In response to the same CAR project proponent clarified that it was on account of typographical mistake (/04/). CAR 5 was closed out.

3.3 Remaining Issues, CAR's, FAR's from Previous Validation or Verification

Not applicable

3.4 Project Implementation

Project was implemented and equipment installed as described in the registered PDD;

3.5 Completeness of Monitoring

The reporting procedures reflect the content of the monitoring plan. The monitoring mechanism is effective and reliable.

3.6 Accuracy of Emission Reduction Calculations

The calculation of emission reductions is found to be correct. However mistake observed for equation used for baseline emission reduction calculation & inconsistency in value for emission reductions was corrected by project proponent in revised monitoring report version 3 dated 07th May 2008 . The details of the reported and the verified values for all parameters are listed in section 4.

3.7 Quality of Evidence to Determine Emission Reductions

Critical parameters used for the determination of the Emission Reductions are discussed above in section 3.2 above. All the data recorded is in compliance with the monitoring report.

3.8 Management System and Quality Assurance

The companies involved in the project have ISO 9001:2000, and ISO14001:2004 quality assurance system implemented, therefore we can affirm that the management system the CDM project is in place; with the responsibilities properly identified and in place.

In order to verify data quality, the companies involves in the project works in accordance with a quality assurance procedure (Procedure for Monitoring Plan Implementation), which establishes the operational and management structure implemented.

3.9 Data from External Sources

The parameters OM emission factor for relevant grid, BM emission factor for relevant grid & CM (Baseline) CO2 emission factor for relevant grid were calculated once and fixed at the validation time (/02/).

The registered PDD has calculated the baseline grid emission factor for southern regional grid as combined margin using the 3 years average data for Operating margin (i.e. for year 2001-02, 2002-03 and 2003-04) and recent year data (2003-04) for build margin available during the PDD validation. The PDD page 11 mentions "*as required under ACM0004, the baseline emissions are calculated as per combined margin (CM) approach described under ACM0002, both in terms of relevant grid definitions and the emission factors. The simple operating margin (OM) in the baseline emissions is calculated using equation (1) described in ACM0002. The Simple OM method has been used since low-cost/must run resources constitute less than 50% of total grid generation in average of the five most recent years (2001-2005), as required under*

ACM0002. For calculating the simple OM, data vintage of 3-year average (based on the most recent publicly available statistics available at the time of PDD submission) has been used.

The then applicable methodology ACM0002 *version5 page 6 clearly mentions that "The Simple OM emission factor can be calculated using either of the two following data vintages for years(s) y:*
A 3-year average, based on the most recent statistics available at the time of PDD submission, or
The year in which project generation occurs, if EFOM,y is updated based on ex post monitoring.

Thus, this was accepted that the approach to calculate EF in the registered PDD was to fix the same ex-ante This is further verified from the registered PDD Annex 3 and also from section 3.4 page 15 of the validation report. But the regd. PDD section D.2.1.3 monitoring plan mentions that the parameters (parameter no. 7 to 12) related to grid emission factor (EFy) will be monitored 'Yearly' which is not inline with the rest of the PDD and validation report.

Thus FAR1 was raised and PP submitted revised Monitoring plan for UNFCCC approval which reflects that all the parameters (parameter no. 7 to 12) related to grid emission factor will not be monitored yearly since EF was fixed ex-ante during validation. PP has already submitted the revised monitoring plan to UNFCCC which is pending for the approval.

The next issuance request for this project activity will be submitted after the approval of the revised monitoring plan for the project activity. The verification report section 5 has already this information mentioned and section 3.9 and 6.0 in the verification report (Annex 1) was revised to reflect this information.

The parameters: Net calorific Value, Carbon emission factor & Oxidation Factor for furnace oil is referred from the IPCC 2006 default values.

For the estimation of project emissions due to fossil fuel consumption(furnace oil) values for NCV, Oxidation Factor & Emission Factor are required which should be as per IPCC default value (/02/) but in monitoring report version 01 for the monitoring period these values were not according to IPCC 2006 values(/11/). CAR 3 was raised. In response to it project proponent used values as per latest IPCC 2006 for estimation of project emissions. CAR 3 was closed out.

4. Calculation of Emission Reductions

Parameter	Reported Value	Verified Value
Quantity of furnace oil (auxiliary fuel) used by project activity (Tonnes)	1103.2	1166.67
Net calorific Value of Furnace oil (TJ/t)	0.04279	0.0404
Carbon emission factor for furnace oil (tC/TJ)	20.2	21.1
Total Electricity Generated (MWh)	70585.24	70585.24
Auxiliary Electricity (MWh)	5784.344	5,917.099
Net Electricity supplied to KSL facility (MWh)	64800.9	64,668.14
Simple OM emission factor for relevant grid (tCO2/MWh) (calculated ex-ante during the validation)	1.261	1.261
BM emission factor for relevant grid (tCO2/MWh) (calculated ex-ante during the validation)	0.960	0.960
CM (Baseline) CO2 emission factor for relevant grid (tCO2/MWh) (calculated ex-ante during the validation)	1.110	1.110
Quantity of LPG used in CPP (kg)	57	57

BEy = Net electricity supplied to KSL facility x CM

= 64668.14 MWh x 1.110 tCO_2/MWh

= 71782 tCO_2

PEy = Qty of FO (furnace oil) used x NCV of FO x EF of FO x Oxidation Factor

= 1166.67 Tonne x 0.0404 TJ/Tonne x 21.1 tC/TJ x 1.00

= 3647 tCO_2

ER = BEy – Pey

= 71782 – 3647

= 68135 tCO_2

Based on the verified value, the emissions reductions are **68,135 tCO2e.**

5. Recommendations for Changes in the Monitoring Plan

There is ambiguity in the monitoring of the grid emission factor for the project activity. The registered PDD has calculated the baseline grid emission factor for southern regional grid as combined margin using the 3 years data for Operating margin (i.e. for year 2001-02, 2002-03 and 2003-04) and recent year data (2003-04) for build margin available during the PDD preparation. Thus by definition of combined margin it is fixed ex-ante. This is verified from the registered PDD Section B.3 and B.4 and Annex 3 and also from section 3.4 page 15 and 16 of the validation report. But the regd. PDD section D.2.1.3 monitoring plan mentions that the parameters (parameter no. 7 to 12) related to grid emission factor (EFy) will be monitored 'Yearly' which is not inline with the rest of the PDD and validation report. Thus FAR 1 is raised and PP submitted revised Monitoring plan for UNFCCC approval which reflects that all the parameters (parameter no. 7 to 12) related to grid emission factor will not be monitored yearly since they are fixed ex-ante during validation. PP has already submitted the revised monitoring plan to UNFCCC which is pending for the approval.

The next issuance request for this project activity will be submitted after the approval of the revised monitoring plan for the project activity.

6. Overview of 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 results of the compliance assessment are recorded in the verification checklist which is used as an internal report only.

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. Vikrant Badve (Lead Assessor) and Manish Kumar Dabkara (Local Assessor) visited the sites and undertook interviews, collected data, audited the implementation of procedures, checked calibration certificates and checked data, inter alia.

The results of the site visits are recorded in the verification checklist which is used as an internal report only.

The evidences have been checked and collected. The revised monitoring report is attached with this verification report.

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

The Simple OM emission factor for relevant grid, BM emission factor for relevant grid & CM (Baseline) CO2 emission factor for relevant grid have been fixed ex ante for entire crediting period during the validation stage.

The registered PDD has calculated the baseline grid emission factor for southern regional grid as combined margin using the 3 years data for Operating margin (i.e. for year 2001-02, 2002-03 and 2003-04) and recent year data (2003-04) for build margin available during the PDD preparation. Thus by definition of combined margin it is fixed ex-ante. This is verified from the registered PDD Section B.3 and B.4 and Annex 3 and also from section 3.4 page 15 and 16 of the validation report. But the regd. PDD section D.2.1.3 monitoring plan mentions that the parameters (parameter no. 7 to 12) related to grid emission factor (EFy) will be monitored 'Yearly' which is not inline with the rest of the PDD and validation report. Thus FAR 1 is raised and PP submitted revised Monitoring plan for UNFCCC approval which reflects that all the parameters (parameter no. 7 to 12) related to grid emission factor will not be monitored yearly since they are fixed ex-ante during validation. PP has already submitted the revised monitoring plan to UNFCCC which is pending for the approval.

The value of parameters like Net calorific Value, Carbon emission factor & Oxidation Factor for furnace oil are referred as default values from the IPCC guideline 2006.

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.

Yes. The monitoring methodology has been correctly applied and the monitoring report and supporting references are complete and transparent.

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant?

Yes recommendations have been issued to PP to revise the regd. Monitoring plan for the project activity and get it approved from UNFCCC before submitting next issuance request (see section 5 for more details on this) .However no recommendations has been issued for changes in the monitoring methodology.

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 and monitoring plan. The emission reduction was 62958 tCO2 for the period 01/01/2007 to 31/12/2007 as per the estimation made in the registered PDD. The actual emission reduction has been verified as 68135 tCO2e 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 such non conformity of the actual project activity and its operation with the registered project design document has been observed."

Yes, the monitoring report is available at ref. UNFCCC Project Reference Number 0427 on UNFCCC website http://cdm.unfccc.int:80/UserManagement/FileStorage/VFO1ZZNX8KB0S5KVX8TSM9JH8SY4L

7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by Kalyani Steels Limited to perform the verification of the emission reductions reported for the CDM project "Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India" with UNFCC Reference Number 0427 in the period 01/01/2007 to 31/12/2007.

The verification is based on the validated and registered project design document and the monitoring report for this project. Verification is performed in accordance with section I of Decision 3/CMP.1, and relevant decisions of the CDM EB and CoP/MoP. The scope of this engagement covers the verification and certification of greenhouse gas emission reductions generated by the above project during the above mentioned period, as reported in "Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India" version 4 dated 10th June 2008.

The management of the Kalyani Steels Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project Monitoring Report version 04 dated 10th June 2008. Calculation and determination of GHG emission reductions from the project is the responsibility of the management of the "Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India" .The development and maintenance of records and reporting procedures are in accordance with the monitoring report.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/01/2007 to 31/12/2007 based on the reported emission reductions in the Monitoring Report version 04 dated 10th June 2008 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, SGS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

SGS confirms that the project is implemented as described in the validated and registered project design documents. Based on the information we have seen and evaluated, we confirm the following:

Project Title:	Electricity generation at 8 MW captive power plant using enthalpy of flue gases from blast furnace operations of Kalyani Steels Limited, in Karnataka state of India
UNFCCC Reference Number:	0427
Registered PDD and Approved Used for Verification:	Registered PDD version 03 dated 17th August 2006 for the project activity.
Methodology Used for Verification:	ACM0004,Version 2 dated 03 March 2006
Applicable Period:	01/01/2007 to 31/12/2007
Total GHG Emission Reductions Verified:	**68135** tCO2e

Signed on behalf of the Verification Body by Authorized Signatory

Signature: 

Name: Siddharth Yadav

Date: 19th December 2008

8. Document References

/01/ Project webpage http://cdm.unfccc.int/Projects/DB/BVQI1146639607.87/view

/02/ Registered PDD version 03 for the project activity dated 17th August 2006

/03/ 3rd Monitoring Report Version 1 dated 11th Feb 2008

/04/ 3rd Monitoring Report Version 3 dated 07th May 2008

/05/ Previous verification report for the project activity

/06/ ACM0004,Version 2 dated 03 March 2006

/07/ Emission Reduction Calculation Sheet dated 11th Feb 2008

/08/ Emission Reduction Calculation Sheet dated 3rd April 2008

/09/ Copy of Plant Log Book for FO Consumption and break down maintenance log book for FO consumption

/10/ BFG & FO calibration sheets

/11/ IPCC default value for oxidation factor as per IPCC guideline 2006

/12/ Store Requisition Slip for LPG purchase during Monitoring period

/13/ FO density test report applicable for Monitoring period

/14/ Daily report for electricity generation for the period covered under monitoring report

/15/ 3rd Monitoring Report Version 4 dated 10th June 2008

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