CDM Verification and Certification Report for the Santa Cândida Bagasse Cogeneration Project

Periods:

1st December, 2005 to 31st December, 2006

Rev.1, 24th May, 2007

Verification and Certification Report for Santa Cândida Bagasse Cogeneration Project

1 Summary

1.1 SGS United Kingdom Ltd has verified the implementation of the monitoring plan in the registered project number 0065 and the application of the monitoring methodology AM0015: 'Bagasse-based cogeneration connected to an electricity grid'.

1.2 This report presents the results of the periodic verification assessment. A site visit was carried out on 6th March 2007 to verify the data collected during the period: 1st December, 2005 to 31st December, 2006.

2 Introduction

SGS United Kingdom Ltd was contracted by Santa Cândida Açúcar e Álcool Ltda. to perform the periodic verification of Santa Cândida Bagasse Cogeneration Project. This report covers the monitoring period from 1st December, 2005 to 31st December, 2006.
SGS United Kingdom Ltd has carried out verification by Santa Cândida Áçúcar e Álcool Ltda. The first issuance of the CERs happened in 18th August 2006.
This report presents the findings of the periodic 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 emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the Santa Cândida Bagasse Cogeneration Project (registered as CDM 0065) during the period from 1st December, 2005 to 31st December, 2006.

Santa Cândida mill is located in Bocaína, São Paulo, Brazil. The project activity is in operation since 1st August 2002.

This project activity consists of increasing the efficiency in the bagasse (a renewable fuel source, residue from sugarcane processing) cogeneration facility, as well as increasing power capacity, at Santa Cândida Açúcar e Álcool Ltda, a Brazilian sugar mill. By investing to increase in steam efficiency in the sugar and alcohol production and increase in the efficiency of burning the bagasse (more efficient boilers), Santa Cândida generates surplus steam and uses it exclusively for electricity production (through turbo-generators), avoiding the dispatch of same amount of energy produced by fossil-fuelled thermal plants to that grid. The monitoring methodology applied is AM0015: '*Bagasse-based cogeneration connected to an electricity grid*'.

5 Verification Team

Team leader: Fabian Gonçalves
Local assessor: Geisa Principe
Technical reviewer: Irma Lubrecht

6 Itinerary

The Verification team spent a total of 1 man-day on site (not including travel time) and 1,75 man-day offsite for document and records review. The verification visit was carried out on 6th March, 2007.

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 Santa Cândida 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 a 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 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. The local assessor visited the Santa Cândida mill, located in Bocaína, São Paulo. It was possible to verified all equipment installed (co-generation plant) and the monitoring system. The local assessor undertook interviews, collected data, audited the implementation of procedures and checked data, inter alia. No modification has happened since the first verification.

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

Yes. The ex-ante baseline emission factor associated to the electricity (0.2677 tCO_2/MWh) was obtained using data from governmental agencies. The value reported complies with the emission factor calculated and presented in the registered PDD (Ref.1).

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/PDD were implemented correctly. The supporting references and data were complete and transparent.

Calibration certificates for the meters used during the reporting period were verified and copies were obtained from the client. Calibration certificate issued on 16/05/2005 for the ELO 2180, serial number 04402/40072311-5, ABNT version 04.00, calibrator N: 0001, internal standard – P31 (current meter) was checked (Annexure 1).

The calibration procedure and requirement on frequency of calibration was also verified. The meter is under the responsibility of concessionary company (CPFL – energy buyer). CPFL follows the procedure defined by the National System Operator (ONS).

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.

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 number can be determined with a high level of assurance.

An operator collects manually the data in the meter and sends the information to electricity engineer that consolidate the data in the monthly report (Exportação de Energia report).

The electricity engineer of Santa Cândida verifies the CPFL monthly report against internal data collected from the internal operation system and internal control manual to define the value to be invoiced to CPFL.

The number below was calculated considering the period from 1st December 2005 to 31st December 2006.

*ERs = Electricity sold to the grid during the monitoring period * baseline emission factor*

Total electricity generated in the period (12/2005-2006): 66,351.528 MWh
The ex-ante baseline emission factor: 0.2677 tCO_2e/MWh.

*Total emission reduction (12/2005-2006): 66,351.528 MWh * 0.2677 = 17,762 tCO_2e*

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
http://cdm.unfccc.int/Issuance/MonitoringReports

8.1 Corrective Action Requests

1 CAR was raised:

CAR 1

Detail of the non-compliance: The system should include procedures for the calculation of emission reductions and the preparation of the monitoring report; internal control procedures should be implemented for management review.

Objective evidence: The monitoring report was not revised appropriately before to be present to the DOE revised. The data (date and decimal numbers) in the monitoring report is not according to the invoices. The data was typed wrong. The original invoice (number 95085) confirmed the invoicing of 8.032,96MW.

Close out detail: The monitoring report was revised, version 2. CAR 1 was close out.

8.2 Observations

No.

8.3 Confirmation of data verified

Reporting periods:

1st December 2005 to 31st December 2006.

Verified total emission reductions in the above reporting periods: 17,762 t CO_2 equivalents.

Description	01/12/2005 to 31/12/2005	01/01/2006 to 31/12/2006
Metered Electricity Supplied MWh	0,000	66,351.528
Baseline Emission Factor tCO2e/MWh	0.2677	0.2677
Emission Reductions (ERs) tCO2e	0,000	17,762

9 Conclusion on data quality and decision on materiality

Compliance:
Considering that the CAR raised during the verification are adequately addressed, the monitoring report is considered in compliance with the approved monitoring methodology and with the Project Design Document registered.

Data:
The data presented in the 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	Santa Cândida Bagasse Cogeneration Project CDM Ref. 0065
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/CP7, and relevant decisions of the CDM EB and CoP/MoP.
Total GHG emission	17,762 tCO_2e

reductions verified	
Registered PDD and Approved Methodology used for Verification	Santa Cândida Bagasse Cogeneration Project (registered on 24th February 2006 as a CDM project entitled on Santa Cândida Bagasse Cogeneration Project, number 0065) and methodology AM0015: 'Bagasse-based cogeneration connected to an electricity grid (version 01, 22/09/2004).
Verification Opinion with regard to data quality and materiality	The data are considered to be complete, transparent and free of material error or omission. Unqualified opinion.
Applicable period	1st December 2005 to 31st December 2006
Dated and signed on behalf of the verification body by authorized signatory	24/05/2007, Siddharth Yadav 

Annex 1

Key reference documents:

/1/ Santa Cândida Bagasse Cogeneration Project (PDD registered on th February 2006 as a CDM project entitled on Santa Cândida Bagasse Cogeneration Project, number 0065).

/2/ AM0015: 'Bagasse-based cogeneration connected to an electricity grid (version 01, 22/09/2004).

/3/ Santa Cândida Bagasse Cogenration Project (SCBCP) Monitoring Report (version 1, 27th February 2006; version 2, 6th March 2007).

Other documents provided by the Client:

/4/ Invoice CPFL.

/5/ Monthly report (electronic) by Santa Cândida.

/6/ Operation licence – LO number 7001662, issued by CETESB – São Paulo State Environmental Agency (06/04/2006).

/7/ Calibration certificate for meter ELO 2180 number 40072311-5 (16/05/2005)

Persons interviewed:

David Freire da Costa (Econergy/ Engineer Consultant)
Mauricio Rovea (Econergy/Engineer Consultant)
Marco Antonio (Santa Cândida/ Electricity Engineer)
Geraldo José Borin (Santa Cândida/ Industrial Manager)