

**GOLD STANDARD  
VERIFICATION REPORT  
SUSTAINABLE CARBON – PROJETOS  
AMBIENTAIS LTDA**

**VERIFICATION OF  
CEARÁ RENEWABLE ENERGY BUNDLED  
PROJECT**

3<sup>rd</sup> Monitoring Period:  
From 01/05/2013 to 28/02/2014 (both days included)

**IBOPE Instituto Brasileiro de Opinião pública e  
Estatística Ltda.**

Report N. 060402 - Revision N. 01  
Year 2014

|   |   |   |
|---|---|---|
| <b>Gold Standard Verification Report</b><br><b>1<sup>st</sup> Version Date:</b><br>18/06/2014<br><br><b>Final Version Date:</b><br>18/06/2014   | <b>DOE:</b><br>IBOPE<br>Instituto Brasileiro de Opinião<br>Pública e Estatística Ltda.<br>Alameda Santos, 2101, Cerqueira<br>César, São Paulo-SP<br>ZIP Code: 01419-100<br>Brazil | <input checked="" type="checkbox"/> No distribution without<br>permission from client or<br>responsible organizational<br>unit<br><br><input type="checkbox"/> Limited distribution<br><br><input type="checkbox"/> Unrestricted distribution |
| <b>Client:</b><br>Sustainable Carbon - Projetos<br>Ambientais Ltda  | <b>Contact:</b><br>Ms. Mariana Broso Fieri - Technical Analysts.<br>Mr. Thiago de Avila Othero and Mr. Marcelo Hector Sabbagh<br>Haddad -Technical Coordinators.                  |   |
| <b>Project Title:</b><br>Ceará Renewable Energy<br>Bundled Project  | <b>Methodology:</b><br>AMS-I.E - version 04   | <b>Monitoring Period:</b><br>From 01/05/2013 to<br>28/02/2014 (days included)   |
| <b>Project Participants:</b><br>Sustainable Carbon - Projetos Ambientais Ltda<br>Antônio Cavalcante de Souza Olaria-ME<br>Ceará Cerâmica Ltda<br>CEAGRA - Cerâmica e Agropecuária Assunção Ltda<br>Eliane Cavalcante de Souza EPP<br>Cerâmica Santa Rita Ltda   |   |   |
| <b>Summary:</b><br>IBOPE verified the 3 <sup>rd</sup> monitoring period (from 01/05/2013 to 28/02/2014) of the "Ceará Renewable Energy Bundled Project", GS Registration Reference Number 1042, project of Sustainable Carbon - Projetos Ambientais Ltda located in Brazil.<br>The project applies the methodology AMS-I.E version 04, on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting, as well as GS requirements.<br>In summary, IBOPE confirms that the project activity was correctly implemented according to selected monitoring methodology and monitoring plan. Monitoring equipment is installed being essential for generating emission reduction and runs reliably and it is calibrated appropriately. The monitoring system is in place and the project is already generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the emission reductions verified totalize 50,265 tCO <sub>2</sub> e for the monitoring period. IBOPE, therefore, is pleased to issue a positive verification opinion. |   |   |
| <b>Verification Team</b><br><br><b>Role</b><br>Lead Verifier<br>Lead Verifier (in training)   | <b>Full Name</b><br>Mr. Rafael Kupper Bonizio Oliva<br>Mr. Fernando Alarcon Nogueira  |   |
| <b>Technical Review</b><br>Mr. Sebastián del Valle Rosales  |   |   |
| <b>Current Revision Number:</b><br>01   | <b>Number of pages</b><br>35  |   |

## Abbreviations

CAR(s): Corrective Action Request(s)

CDM: Clean Development Mechanism

CL(s): Clarification Request(s)

CO<sub>2</sub>: Carbon Dioxide

DOE: Designated Operational Entity

FAR(s): Forward Action Request(s)

GHG: Greenhouse Gas

GS: Gold Standard

MR: Monitoring Report

PDD: Project Design Document

PP(s): Project Participant(s)

tCO<sub>2</sub>e: Tonne of Carbon Dioxide Equivalent

UNFCCC: United Nations Framework Convention on Climate Change

## Table of Contents

|   |    |
|---|----|
| 1. Introduction.....  | 5  |
| 1.1. Objective .....  | 5  |
| 1.2. Scope .....  | 5  |
| 2. Description of GS Project Activity .....   | 6  |
| 3. Methodology .....  | 7  |
| 3.1. Desk Review .....  | 8  |
| 3.2. On-Site Visit .....  | 9  |
| 3.3. Resolution of CARs, CLs and FARs .....   | 11 |
| 3.4. Internal Quality Control.....  | 11 |
| 4. Verification Findings.....   | 12 |
| 4.1. Remaining issues from previous validation/verification .....                         | 12 |
| 4.2. Compliance of the project implementation with the registered GS PDD .....            | 12 |
| 4.3. Compliance of the monitoring plan with the monitoring methodology .....              | 12 |
| 4.4. Compliance of monitoring activities with the registered monitoring plan .....        | 12 |
| 4.5. MR Deviation and Revision .....  | 18 |
| 4.6. Management System and Quality Assurance .....  | 19 |
| 4.7. Compliance with the calibration frequency requirements for measuring instruments ... | 19 |
| 4.8. Assessment of data and calculation of emission reductions .....                      | 19 |
| Baseline Emissions .....  | 19 |
| 4.8.1. Comparison with the estimated emission reduction in the registered PDD.....        | 22 |
| 5. Verification Opinion .....   | 23 |
| 6. References .....   | 24 |
| 7. <i>Curricula Vitae</i> of Verification Team and Technical Reviewer .....               | 26 |
| 8. Verification Protocol .....  | 27 |

## 1. Introduction

Sustainable Carbon – Projetos Ambientais Ltda has commissioned IBOPE to verify the emissions reductions of its Gold Standard project activity “Ceará Renewable Energy Bundled Project” (hereafter called “project” or “project activity”) in Brazil.

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. This report also considers GS requirements criteria of the Gold Standard Foundation. These criteria refer to GS requirements, version 2.2, GS Toolkit and supporting annexes.

### 1.1. Objective

In carrying out its verification work, the DOE shall ensure that the project activity complies with the following requirements:

- a) Ensure that the project activity has been implemented and operated as per the registered GS PDD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with GS and CDM requirements (when applicable);
- c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology;
- d) Evaluate the data recorded and stored as per the monitoring methodology.

The objective of this independent verification work was to verify and certify emission reductions and check the implementation of sustainable development indicators and mitigation measures monitoring, reported for “Ceará Renewable Energy Bundled Project” in the following period: from 01/05/2013 to 28/02/2014 (both days included).

In particular, monitoring plan, monitoring report and the project’s compliance with relevant GS, UNFCCC and host Party criteria are verified in order to confirm that the project has been implemented in accordance with previously registered project design and conservative assumptions, as documented.

### 1.2. Scope

The scope of the verification comprises an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant

documents provided by PP. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules, GS requirements and associated interpretations.

The verification considers both quantitative and qualitative information on emission reductions and sustainable development indicators. The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

## **2. Description of GS Project Activity**

The project activity is the bundled project of five red ceramic factories belonging to Grupo Tavares, a family business that owns several ceramic factories in the State of Ceará, Brazil.

The following ceramic factories are included in this project: Antônio Ceramic, Ceará Ceramic, Ceagra Ceramic, Eliane Ceramic and Santa Rita Ceramic. Antônio Ceramic and Eliane Ceramic are located at Itaitinga, in the state of Ceará, northeast region of Brazil. Ceará Ceramic and Ceagra Ceramic are located at Aquiraz, also in the State of Ceará. Santa Rita Ceramic is located at São Gonçalo do Amarante, also in the State of Ceará. The ceramic factories produce ceramic bricks, tiles and construction blocks, destined mainly for the regional market in the metropolitan area of Fortaleza.

All ceramics used to utilize predominantly wood without sustainable forest management as fuel. The use of this type of non-renewable biomass is a common practice in the ceramic industry. Firewood used to be the most employed source of primary energy until 1970's, when the petroleum started to supply the majority of Brazilian's energy needs. Moreover, the Brazilian Energy and Mine Ministry has been monitoring every energy sector of Brazil since 1970, and firewood appears over the years monitored as a significant source of thermal energy for ceramic sector.

This project activity reduces the greenhouse gases (GHG) emissions through the substitution of non-renewable biomass for renewable biomasses to generate thermal energy. As renewable biomasses, the project activity utilizes mostly biomass residues (such as cashew nut shells, residues from cashew tree, coconut residues, sawdust) and wood from sustainable forest management plan areas to feed the ceramic's kilns. The project also involves energy efficiency measures, such as improved fuel handling and kilns improvement to reduce the necessary energy per production output.

This project points out the possibility for switching from non-renewable biomass to renewable biomasses, which is unattractive due some barriers, including higher fuel costs, uncertainties associated to the fuel switch and the lack of knowledge to operate with renewable biomass.

The ceramic owners have considered the income from the commercialization of the carbon credits to make the project activity viable.

The main goal of this project activity is to minimize the negative impacts of deforestation to obtain firewood, whose consumption also leads to GHG emissions that contribute to climate change. Moreover, in opposition to the identified baseline, the project activity generates thermal energy exclusively from renewable sources, by using abundant renewable biomasses in the region. All these measures contribute to sustainable development by promoting renewable energy, mitigating atmospheric pollution and improving the quality of employment for the ceramic workers.

By the beginning of 2010, Grupo Tavares initiated tests with renewable biomass in the five ceramic factories included in the current project. The start date of the project activity is considered 02/07/2010, when Grupo Tavares and Sustainable Carbon signed contracts for the development of a GHG emission reduction project in the five ceramic factories included in the current project. All ceramics have operated exclusively with demonstrably renewable biomass since the beginning of the crediting period, which is defined as 01/09/2010.

The emission reductions due to the switching of non-renewable fuel (non-renewable wood) to renewable biomasses resulted in 50,265 tCO<sub>2</sub>e during the monitoring period from 01/05/2013 to 28/02/2014. The contribution to sustainability is being monitored applying the Sustainability Monitoring Plan, described on Section G of the Gold Standard Passport, version 05.

### 3. Methodology

The overall verification was conducted using IBOPE internal procedures.

In order to ensure transparency, a verification protocol was customized for the project, according to CDM and GS requirements.

The protocol shows, in a transparent manner, criteria, means of verification and the results from verifying the identified criteria.

The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a GS project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The completed verification protocol is enclosed in Section 8 of this report.

### 3.1. Desk Review

The verification of the project documentation is based upon quantitative and qualitative information on emission reductions: quantitative information comprises the reported numbers in the monitoring report and qualitative information comprises information on internal management controls, calculation and transfer of data procedures, frequency of emissions reports, review and internal audit of calculations and other relevant information.

The verification has been performed based on the review of the following main documents:

- Registered GS PDD (including monitoring plan) V.5, dated 08 March 2012;
- Monitoring Report V.3, dated 06 June 2014 – Period from 01/05/2013 to 28/02/2014(days included);
- MR calculation\_ceará renewable energy bundled\_01 05 2013\_28 02 2014\_v03

A complete list of all documents reviewed is attached in section 6 of this report.

### 3.2. On-Site Visit

In order to confirm all physical features of the project activity are in place, as described in the registered GS PDD, and that the project participant has operated and correctly monitored all parameters of the registered GS project activity according to registered GS PDD, the verification team had carried out an on-site visit. The on-site visit objectives are, but are not limited to:

- Assess implementation and operation of project activity in comparison with the registered GS PDD and monitoring plan;
- Investigate whether all relevant equipment is installed and working;
- Check the monitoring processes, routines and documentations;
- Review how the monitored parameters are generated, aggregated and reported;
- Check the risks of inappropriate operation and data collection procedures;
- Identify quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameter;

|   |   |   |
|---|---|---|
| <b>Company</b><br>1. Antônio Cavalcante de Souza Olaria-ME<br>2. Ceará Cerâmica Ltda<br>3. CEAGRA – Cerâmica e Agropecuária Assunção Ltda<br>4. Eliane Cavalcante de Souza EPP<br>5. Cerâmica Santa Rita Ltda |   | <b>Period of on-site visit</b><br>From 10/03/2014 to 12/03/2014 |
| <b>Verification Team On-site</b><br><b>Role</b><br>Lead Verifier  | <b>Full Name</b><br>Mr. Rafael Kupper Bonizio Oliva | <b>Date of on-site visit:</b><br>From 10/03/2014 to 12/03/2014  |

| <b>People Interviewed</b> |                                    |
|---------------------------|------------------------------------|
| <b>Role</b>               | <b>Full Name</b>                   |
| Marketing Director        | Mr. Marcelo Guimarães Tavares      |
| Administrative Assistant  | Ms. Maria Letícia Tavares Assunção |
| Production                | Mr. Antônio Carlos                 |
| Production                | Mr. Marciano Tavares de Oliveira   |
| Production                | Mr. Francisco Alberto Venâncio     |
| Production                | Mr. Murilo Savio Galvão Tavares    |

IBOPE interviewed project participant and stakeholders to confirm data and information and also to resolve issues identified in the document review. The main topics of the interviews were:

| <b>Interviewed Organization</b>                | <b>Interview Topics</b>  |
|--|--|
| Local Stakeholders                             | <ul style="list-style-type: none"> <li>• Sustainable Development Indicators</li> <li>• Management and Operational Structure</li> <li>• Changes in Employment</li> <li>• Trainings</li> <li>• Emission Reduction Calculation</li> <li>• Training records</li> <li>• Cross-check procedures</li> <li>• Social security records of employees</li> <li>• Management of Project Activity</li> <li>• Sustainable Development Indicators</li> </ul> |
| Sustainable Carbon – Projetos Ambientais Ltda  |  |
| Antônio Cavalcante de Souza Olaria-ME          |  |
| Ceará Cerâmica Ltda                            |  |
| Ceagra – Cerâmica e Agropecuária Assunção Ltda |  |
| Eliane Cavalcante de Souza EPP                 |  |
| Cerâmica Santa Rita Ltda                       |  |

### 3.3. Resolution of CARs, CLs and FARs

The objective of this phase of the verification is to raise requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for IBOPE positive conclusion on the GHG emission reduction calculation.

Findings established during the initial verification can either be seen as a non-fulfilment of GS and CDM criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

A Corrective Action Request (CAR) is issued, where:

- a) Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- b) Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- c) Issues identified in a FAR during validation or previous verifications to be verified during verification have not been resolved by the project participants.

A Forward Action Request (FAR) is issued, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

A Clarification Request (CL) is issued if information is insufficient or not clear enough to determine whether the applicable requirements have been met.

The verification team identifies CARs, CLs and FARs which has to be adequately responded by PP. If so, the CARs and CLs will be closed by IBOPE.

To guarantee the transparency of the verification process, the concerns raised and response provided by PP are documented in the verification protocol in Section 8.

### 3.4. Internal Quality Control

Following the completion of the assessment process and a recommendation by the Verification Team, all documentation is forwarded to a Technical Reviewer.

The technical review is an independent process performed to examine thoroughly that the process of verification has been carried out in conformance with the requirements of the verification scheme.

The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified before presenting the Verification report to PP.

The Technical Reviewer will either accept or reject the recommendation made by the verification team.

#### **4. Verification Findings**

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow up visit, such as Clarification, Corrective and Forward Action Requests are further documented in the Verification Protocol in Section 8.

The verification of the Project resulted in 04 Corrective Action Requests, 03 Clarification Requests, and 01 Forward Action Requests.

The CARs, CLs and FARs were closed based on adequate responses from the Project Participant(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

##### **4.1. Remaining issues from previous validation/verification**

All CARs and CLs raised were successfully closed during the validation/verification stage of the project activity, and no remaining issues were left.

There is 01 FAR that shall be addressed in the next monitoring period.

##### **4.2. Compliance of the project implementation with the registered GS PDD**

The implementation status of the project is in accordance with the project description contained in the registered GS PDD V.5 –dated 08/03/2012 and it is fully operational, as confirmed by verification team through visual inspection in the on-site visit. The project is operating in normal condition during the reported monitoring period (from 01/05/2013 to 28/02/2014). The facilities have not been modified and presented proper operating conditions.

##### **4.3. Compliance of the monitoring plan with the monitoring methodology**

The monitoring plan and the monitoring system implemented are in accordance with the approved methodology applied: AMS-I.E: “Switch from non-renewable biomass for thermal applications by the user” – Version 04.

Verification Team confirms that the monitoring plan in the GS PDD complies with the applied methodology.

##### **4.4. Compliance of monitoring activities with the registered monitoring plan**

Monitoring has been carried out in accordance with the monitoring plan contained in the registered GS PDD.

All parameters stated in the validated monitoring plan are monitored and reported appropriately. The Verification Team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for these parameters including the values in the monitoring reports are described below:

|                              |  |
|------------------------------|--|
| <b>Parameter</b>             | $PR_y$   |
| <b>Description</b>           | Amount of products produced in year y  |
| <b>Data unit</b>             | Thousands of ceramic pieces  |
| <b>Source of data used</b>   | Controlled by the ceramic owners.  |
| <b>Means of verification</b> | <p>Verification team verified <math>PR_y</math> through desk review, and checked on-site visit that the amount of products produced by the project used in the calculation and reported in the MR are correct and traceable to the data.</p> <p>Evidences were taken from manual control of devices burned in the kiln for each ceramic factory were verified and accepted by the verification team.</p> |

|                              |   |
|------------------------------|---|
| <b>Parameter</b>             | Qrenbiomass   |
| <b>Description</b>           | Amount of renewable biomass used during year y of the crediting period.   |
| <b>Data unit</b>             | Tonnes  |
| <b>Source of data used</b>   | It was monitored through purchase invoice, delivery notes or other documents concerning the acquisition of renewable biomasses.   |
| <b>Means of verification</b> | <p>During the onsite visit and desk review, verification team verified that the amount of renewable biomass used during the monitoring period by the project used in the calculation and reported in the MR are correct and traceable</p> <p>Evidences and records of purchase invoices and delivery notes of renewable biomass (such as cashew nut shell, residues from cashew tree) for each ceramic were verified and accepted by the verification team.</p> |

|                    |  |
|--------------------|--|
| <b>Parameter</b>   | $f_{NRB,y}$  |
| <b>Description</b> | Fraction of woody biomass used in the absence of the project activity in year y that can be established as non-renewable using survey methods. |
| <b>Data unit</b>   | Fraction or percentage   |

|                              |   |
|------------------------------|---|
| <b>Source of data used</b>   | Survey methods  |
| <b>Means of verification</b> | Verification team checked the survey methods and accepted it accordingly. |

|                              |  |
|------------------------------|--|
| <b>Parameter</b>             | Origin of Renewable Biomass  |
| <b>Description</b>           | Renewable origin of the biomass  |
| <b>Data unit</b>             | Not applicable   |
| <b>Source of data used</b>   | Controlled by the ceramic owners   |
| <b>Means of verification</b> | During the on-site visit and desk review, verification team verified the origin of renewable biomass. Evidences and records of the purchase invoices and delivery notes of renewable biomass for each ceramic company were verified and accepted by the verification team. |

|                              |  |
|------------------------------|--|
| <b>Parameter</b>             | Leakage due to competing uses of biomass   |
| <b>Description</b>           | This source of leakage was relevant for biomass residues and biomass from existing forests, according to the general guidance on leakage in biomass project activities. The quantity of renewable biomass available was assessed annually to determine the occurrence of leakage.  |
| <b>Data unit</b>             | tCO <sub>2</sub> e   |
| <b>Source of data used</b>   | <p>Surplus of wood from sustainable forest management areas was obtained through a methodology developed by an expert hired by Sustainable Carbon, which assesses the availability and surplus of Caatinga firewood from forest management plans.</p> <p>Surplus of the other types of renewable biomass used by the project activity was assessed by Sustainable Carbon from July to October 2012. Information on the biomass availability and consumption was assessed by Sustainable Carbon following a methodological plan that was based on the application of questionnaires to relevant biomass experts, producers and suppliers. An independent third party expert opinion on the results and findings of such study was obtained, to ensure the results are appropriate and conservative.</p> |
| <b>Means of verification</b> | <p>Verification team checked the study "Renewable Biomass Surplus In The State Of Ceará, Brazil", version 02, from November, 2012 and all documents related to this study.</p> <p>Verification team also checked the study Effective Availability and Surplus of Firewood _v19.07.2013, and Effective Availability and Surplus of Firewood_Ceará and related documents to this study.</p> <p>Verification team considered appropriate the calculation methods</p>  |

|  |   |
|--|---|
|  | utilized to leakage emissions due to competing uses of biomass. |
|--|---|

|                              |   |
|------------------------------|---|
| <b>Parameter</b>             | Leakage of non-renewable woody biomass  |
| <b>Description</b>           | Leakage relating to non-renewable woody biomass   |
| <b>Data unit</b>             | tCO <sub>2</sub> e  |
| <b>Source of data used</b>   | Monitored   |
| <b>Means of verification</b> | During the on-site visit and desk review, verification team checked the renewable origin of the biomass. Evidences and records of purchase invoices and delivery notes of renewable biomass for each ceramic factory were verified and accepted by the verification team. |

|                              |   |
|------------------------------|---|
| <b>Parameter</b>             | Checking of all appliances (kiln)   |
| <b>Description</b>           | Checking of all appliances (kiln)   |
| <b>Data unit</b>             | Not applicable  |
| <b>Source of data used</b>   | Ceramic owners and employees  |
| <b>Means of verification</b> | During the on-site visit and desk review, the verification team checked the appliances. Evidences were obtained by visual inspection. |

With respect to GS requirements, the project has to monitor the sustainability indicators, as defined in the GS Sustainability Monitoring Plan in the GS Passport.

The verification of the parameters required by the monitoring plan is provided as follows:

|                              |  |
|------------------------------|--|
| <b>Number</b>                | 01   |
| <b>Indicator</b>             | Air quality  |
| <b>Chosen Parameter</b>      | Emissions to the atmosphere  |
| <b>Way of Monitoring</b>     | Evaluations by applying Ringelmann smoke charts as recommended by SEMACE (Environmental Superintendence of the State of Ceará), the environmental authority. Results shall be stored to assess the intensity of atmospheric emissions.       |
| <b>Means of verification</b> | Verification Team checked the monitoring spreadsheets used in the Ceramic Factors during onsite visit.<br><br>During this monitoring period, ceramic owners applied the Ringelmann smoke chart and the results were compiled in proper files |

|                              |  |
|------------------------------|--|
| <b>Number</b>                | 02   |
| <b>Indicator</b>             | Soil condition   |
| <b>Chosen Parameter</b>      | Procedures related to the control and disposal of ashes  |
| <b>Way of Monitoring</b>     | <p>Ashes are to be quantified by using standard storage bags with a known weight. Employees on the ceramic used spreadsheets to control the amount of storage bags leaving the ceramic each time ashes were collected for final destination.</p> <p>Such spreadsheet shall also include information on the destination of ashes, such as the person/entity responsible for collecting the ashes and the place of destination. Photographs are to be used as evidence of the final destination whenever feasible.</p> <p>Interviews and meetings with stakeholders and ceramic personnel on each ceramic should also be applied to identify the relevant score under the Social Carbon indicator.</p> |
| <b>Means of verification</b> | <p>Verification Team checked the monitoring spreadsheets used in the Ceramic Factors during onsite visit.</p> <p>During this monitoring period, ceramic owners have provided a proper destination to ashes resulted from biomass combustion. Ashes quantification and destination method are documented on proper files.</p>   |

|                              |  |
|------------------------------|--|
| <b>Number</b>                | 03   |
| <b>Indicator</b>             | Quality of employment  |
| <b>Chosen Parameter</b>      | Actions of health and security   |
| <b>Way of Monitoring</b>     | Site visits and interviews with employees and Managers of each Ceramic factory.  |
| <b>Means of verification</b> | <p>Verification team checked the training certificates of each ceramic factory, and checked compliance by onsite interviews.</p> <p>Verification team also checked that there are warning signs regarding the correct use of IPE displayed into the factories.</p> |

|                              |  |
|------------------------------|--|
| <b>Number</b>                | 04   |
| <b>Indicator</b>             | Quality of employment  |
| <b>Chosen Parameter</b>      | Use of safety equipment  |
| <b>Way of Monitoring</b>     | Ceramic managers are to use spreadsheets to control the use of safety equipment by employees. Employees should provide their signatures on such spreadsheet each time they receive safety equipment. |
| <b>Means of verification</b> | Verification Team checked the monitoring spreadsheets of IPE   |

|  |  |
|--|--|
|  | distribution used in the Ceramic Companies during onsite visit.<br>Ceramic Company managers documented the receiving control through spreadsheets with the signature of each employee. |
|--|--|

|                              |   |
|------------------------------|---|
| <b>Number</b>                | 05  |
| <b>Indicator</b>             | Access to affordable and clean energy services  |
| <b>Chosen Parameter</b>      | Total energy produced from renewable  |
| <b>Way of Monitoring</b>     | The amount of renewable biomass used by each ceramic was monitored during the crediting period (through purchase invoice, delivery notes or other documents concerning the acquisition of biomass).<br>By using default values of energy content, the project proponents were able to determine the amount of renewable energy produced during each year of the crediting period. |
| <b>Means of verification</b> | Verification team checked this indicator by purchase invoices and delivery notes during the onsite visit.   |

|                              |   |
|------------------------------|---|
| <b>Number</b>                | 06  |
| <b>Indicator</b>             | Quantitative employment and income generation   |
| <b>Chosen Parameter</b>      | Voluntary emission reductions issued  |
| <b>Way of Monitoring</b>     | The issuance of voluntary emission reductions (or similar assets from the carbon market) will be monitored. |
| <b>Means of verification</b> | Verification Team checked this indicator by the analyses of VER issuance.                                   |

|                              |  |
|------------------------------|--|
| <b>Number</b>                | 07   |
| <b>Indicator</b>             | Quantitative employment and income generation  |
| <b>Chosen Parameter</b>      | Additional revenues for biomass suppliers  |
| <b>Way of Monitoring</b>     | Total revenues will be monitored by storing purchase invoices, receipts of sale and other documents concerning biomass acquisition.<br><br>Total revenues shall be compared to the baseline fuel cost for the ceramics which were destined to native firewood suppliers. This parameter is defined ex-ante using data from 2009 (the most recent year prior to the project start date).<br><br>A conservative correction factor of 15% will be applied annually, to account for general price increase due to inflation. |
| <b>Means of verification</b> | Verification team checked this indicator by purchase invoices and delivery notes during the onsite visit, and by analysing the   |

|  |  |
|--|--|
|  | document MR calculation_ceará renewable energy bundled_01 05 2013_28 02 2014_v03 |
|--|--|

|                              |   |
|------------------------------|---|
| <b>Number</b>                | 08  |
| <b>Indicator</b>             | Origin of renewable biomass   |
| <b>Chosen Parameter</b>      | Origin of renewable biomass   |
| <b>Way of Monitoring</b>     | The origin of the renewable biomass will be assessed storing documents (receipts, invoices) from the biomasses providers, thus allowing determining its origin. The biomasses shall be considered renewable as fulfilling definitions of renewable biomass approved by the CDM Executive Board. |
| <b>Means of verification</b> | Verification team checked this indicator by purchase invoices and delivery notes during the onsite visit.   |

|                              |  |
|------------------------------|--|
| <b>Number</b>                | 09   |
| <b>Indicator</b>             | Competing uses of biomass  |
| <b>Chosen Parameter</b>      | Biomass surplus  |
| <b>Way of Monitoring</b>     | <p>According to the Gold Standard Passport, national and international articles and databases should be assessed to determine the availability of each type of biomass used during the project operation.</p> <p>However, in response to FAR 1 raised by the Gold Standard Secretariat during project registration, Sustainable Carbon has developed a detailed Study on the surplus of all types of biomass used by the project activity. In addition to the first study, which could not determine the surplus of firewood with certainty, a new evaluation of an expert has been requested and a methodology has been developed in response to confirm the existence of availability and surplus of firewood at Caatinga forest management plans.</p> |
| <b>Means of verification</b> | <p>Verification team checked the study "Renewable Biomass Surplus In The State Of Ceará, Brazil", version 02, from November, 2012 and documents related to this study.</p> <p>Verification team also checked the study Effective Availability and Surplus of Firewood _v19.07.2013, and Effective Availability and Surplus of Firewood_Ceará and related documents to this study.</p>  |

#### 4.5. MR Deviation and Revision

The PPs have not deviated from the provisions of the registered monitoring plan, therefore a deviation or revision request was not submitted.

#### 4.6. Management System and Quality Assurance

The responsible for registration, monitoring, measurement and reporting the monitored data for Antônio Ceramic, Ceará Ceramic, CEAGRA Ceramic and Eliane Ceramic is Mr. Francisco Evanildo de Souza and for Santa Rita Ceramic is Mr. Erinaldo Duarte.

The responsible for applying the monitoring methodology and elaborating the MR is Sustainable Carbon – Projetos Ambientais Ltda.

- Thiago de Avila Othero - Technical Coordinator
- Marcelo Hector Sabbagh Haddad - Technical Coordinator
- Mariana dos Santos Silva - Technical Analyst

Therefore, the verification team concludes that the monitoring plan and relevant procedures reflect a good and appropriate monitoring practice to the project according to interviews made during the on-site visit. The verification team confirms that the PP was able to implement the monitoring plan as per the requirements of the applied monitoring methodology, GS and CDM requirements.

#### 4.7. Compliance with the calibration frequency requirements for measuring instruments

No monitoring equipment was used to determine any parameter.

#### 4.8. Assessment of data and calculation of emission reductions

IBOPE confirms that appropriate methods and formula for calculating baseline emissions, project emissions and leakage have been followed, and the assumptions, emission factors and default values that are applied in the calculation have been justified.

During the on-site visit, the verification team checked the implemented process and the actual monitoring plan (monitored parameters, source of data, and frequency of measurements).

Through desk review the verification team confirms the implementation of the project activity and the monitoring plan is in accordance with the registered PDD and the MR.

#### Baseline Emissions

According to the registered PDD and the approved methodology, the formula used to calculate the baseline emissions is:

$$ER_y = B_y \times f_{NRB,y} \times NCV_{\text{biomass}} \times EF_{\text{projected fossil fuel}}$$

Where:

**ER<sub>y</sub>**: Emission reductions during the year y in tCO<sub>2</sub>e

**B<sub>y</sub>**: Quantity of woody biomass that was substituted or displaced in tonnes

**f<sub>NRB,y</sub>**: Fraction of woody biomass used in the absence of the project activity in year y that was established as non-renewable biomass using survey methods

**NCV<sub>biomass</sub>**: Net calorific value of non-renewable woody biomass that was substituted, in TJ/ton

**EF<sub>projected fossil fuel</sub>**: Emission factor for substitution of non-renewable woody biomass by similar consumers, in tCO<sub>2</sub>e/TJ.

**B<sub>y</sub>** was calculated according to option (a) of the selected methodology, as follows:

(a) **B<sub>y</sub>** was calculated as the product of the number of appliances multiplied by the estimate of average annual consumption of woody biomass per appliance (tonnes/year);

The consumption of woody biomass in the kilns was calculated as the amount of products (ceramic pieces) produced and the consumption of woody biomass per thousand of ceramic pieces fired in year y, as follows:

$$\mathbf{B}_y = \mathbf{PR}_y \times \mathbf{BF}_y$$

Where:

**PR<sub>y</sub>**: Amount of products produced in year y, in thousands of ceramic pieces

**BF<sub>y</sub>**: Quantity of woody biomass per thousand of ceramic units fired in year y.

The quantity of woody biomass that was substituted (**B<sub>y</sub>**) is calculated by multiplying the amount of products produced (**PR<sub>y</sub>**) with the quantity of woody biomass fired (**BF<sub>y</sub>**). The counting of the total production was monitored by employees on each ceramic. Data was aggregated on a monthly basis from manual control of devices burned in the kiln, measured by monthly reports.

During the on-site visit and desk review the verification team checked the amount of products produced (**PR<sub>y</sub>**) through records of manual control of devices burned in the kiln.

The value of (**BF<sub>y</sub>**) was determined with the use of the historical records from the ceramics included in the project, by dividing monthly average consumption in the baseline by monthly average baseline production.

In the current monitoring period, the value of (**BF<sub>y</sub>**) was revised by the PP, because the quantity of biomass was provided in m<sup>st</sup> (piled volume), but the calculations in the spreadsheets were using the value as m<sup>3</sup> (solid volume), and no conversion calculation was used. Therefore the parameter (**BF<sub>y</sub>**) was revised in this monitoring report.

The DOE agreed with the revision of the parameter, ( $BF_y$ ), and that no revision of the registered PDD is necessary, since this change does not affect the Emissions Reductions, neither is a critical or major change in the project activity.

The values are inputted in an electronic spreadsheet by the ceramic responsible and Sustainable Carbon has access to the information and then applied to the baseline emission calculations. The verification team confirms the correct application of the values on the MR Calculation spreadsheet.

The fraction of woody biomass used in the absence of the project activity ( $f_{NRB,y}$ ) applied in the calculation was revised, because there was some difference since the reference of non-renewable biomass was in mst (piled volume), but the value used in the spreadsheets and calculations were using m<sup>3</sup> (solid volume), and no conversion calculation was used. The values for  $f_{NRB,y}$  were updated and corrected by the PP accordingly.

### **Leakage Emissions**

Leakage is estimated at 0 (zero) tCO<sub>2</sub>e during the current monitoring period.

The sources of leakage relevant to the present project activity are the competing use of biomass for biomass from existing forests and for biomass residues or waste, in which follows the general guidance on leakage in biomass project activities.

In response to FAR 1 raised by the Gold Standard Secretariat during project registration, Sustainable Carbon has developed a detailed Study "Renewable Biomass Surplus in the State of Ceará, Brazil" on the surplus of all types of biomass used by the project activity. Such study was developed from July to November, 2012.

In the current monitoring period, the surplus of wood from sustainable management area was analyzed through a methodology developed by a biomass expert, and another study from Sustainable Carbon comparing the effective available amount of wood from sustainable management area and the amount of wood provided by Forest Origin Documents.

Through desk review the verification team accessed the Studies and all documents related to this study and verified that the analysis and the calculations were performed in a conservative manner.

The conclusion reached by these Studies is that the estimates of the surplus of each are at least 25% for the whole renewable biomasses in the project activity.

The applied methodology does not include any source of project emissions, then the emission reductions for the project activity is equal to the baseline emissions.

| <b>Ceará Renewable Energy Bundled Project</b>                           | <b>May to December 2013</b> | <b>January to February 2014</b> | <b>Total monitoring period</b> |
|---|-----------------------------|---------------------------------|--------------------------------|
| Baseline emissions (tCO <sub>2</sub> e)                                 | 40,474                      | 9,791                           | 50,265                         |
| Project emissions (tCO <sub>2</sub> e)                                  | 0                           | 0                               | 0                              |
| <b>Emissions reductions for the project activity (tCO<sub>2</sub>e)</b> | <b>40,474</b>               | <b>9,791</b>                    | <b>50,265</b>                  |

The baseline calculations, leakage and emission reduction calculations are carried out electronically with a spreadsheet; therefore the calculations are transparent, traceable and of high quality.

#### **4.8.1. Comparison with the estimated emission reduction in the registered PDD**

The emission reductions declared during the 2<sup>nd</sup> monitoring period is 50,265 tCO<sub>2</sub>e for 10 months, compared with the estimated and stated in the registered GS PDD 30,144 tCO<sub>2</sub>e, for 10 months, it was verified that value is 66,8% higher than the estimation.

This is explained due to the production increase in the ceramic companies, which is justified by the market demand and economic scenario, as can be verified through articles and economic information, as well as can be verified in the last monitoring period.

Hence, based on these evidences and onsite interviews, the Verification Team deemed that the difference between the estimated and the verified amount of emission reductions are feasible and real.

**5. Verification Opinion**

IBOPE has performed the 3<sup>rd</sup> periodic verification of the Ceará Renewable Energy Bundled Project in Brazil, which applies the methodology AMS.I-E version 04. The verification was performed based on GS and CDM requirements.

The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of Sustainable Carbon – Projetos Ambientais Ltda is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring Plan indicated in the registered GS PDD. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

IBOPE verified the Project Monitoring Report version 03 (from 06/06/2014) for the reporting period as indicated below. IBOPE confirms that the project is implemented as described in validated and registered GS PDD. Installed equipment being essential for generating emission reduction runs reliably. The monitoring system is in place and the project is generating GHG emission reductions

IBOPE can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project’s GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, IBOPE confirms the following statement:

Reporting period: From 01/05/2013 to 28/02/2014

|                     |   |                           |
|---------------------|---|---------------------------|
| Baseline emissions  | : | 50,265 tCO <sub>2</sub> e |
| Project emissions   | : | 0 tCO <sub>2</sub> e      |
| Leakage emissions   | : | 0 tCO <sub>2</sub> e      |
| Emission Reductions | : | 50,265 tCO <sub>2</sub> e |

18/06/2014

Sebastián del Valle Rosales  
 Technical Reviewer

18/06/2014

Rafael Kupper Bonizio Oliva  
 Lead Verifier

## 6. References

Documents provided by Sustainable Carbon – Projetos Ambientais Ltda that relate directly to the GHG components of the project and documents related to the design and/or methodologies employed in the design and/or other reference documents.

### Ref. PPs Documents

1. GS PDD – V.5 – 08/03/2012
2. Validation Report – V.1 – Dated: 02/08/2013
3. 3<sup>rd</sup> Period Monitoring Report – V.1 – 28/02/2014
4. 3<sup>rd</sup> Period Monitoring Report – V.2 – 26/05/2014
5. 3<sup>rd</sup> Period Monitoring Report – V.3 – 06/06/2014
6. MR Calculation\_Ceará Renewable Energy Bundled\_01 05 2013\_28 02 2014
7. MR calculation\_ceará renewable energy bundled\_01 05 2013\_28 02 2014\_v02
8. MR calculation\_ceará renewable energy bundled\_01 05 2013\_28 02 2014\_v03
9. Records of Manual control of devices burned in the kiln for each ceramic factory
10. Records of purchase invoices and delivery notes of renewable biomass for each ceramic factory
11. Study “Renewable Biomass Surplus In The State Of Ceará, Brazil”, Version 02 November, 2012
12. Study “Effective Availability and Surplus of Firewood” \_v19.07.2013
13. Study “Effective Availability and Surplus of Firewood\_Ceará”
14. Monitoring spreadsheets - air quality
15. Monitoring spreadsheets – soil condition
16. Training certificate – quality of employment

### Ref. Requirements, Procedures, Methodologies, Rules and guidance documents

17. The Gold Standard requirements, version 2.2
18. The Gold Standard Toolkit version 2.2

19. UNFCCC Approved Small Scale Methodologies - AMS-I.E: "Switch from non-renewable biomass for thermal applications by the user" – Version 04.
20. General guidance on leakage in biomass project activities (Attachment C of Appendix B)
21. VVS version 03.0 (EB 70 annex 3)

## **7. *Curricula Vitae* of Verification Team and Technical Reviewer**

### **Sebastián del Valle Rosales**

Graduated in chemical engineering and Master of Science in technology and resource management with specialization in renewable energy systems.

Lead Auditor for Green House Gases and Climate Change Projects with more than 7 years' experience. Mr. del Valle has also known-how on the implementation of energy efficiency systems, life cycle assessments of products and systems, and Sustainable Building.

### **Rafael Kupper Bonizio Oliva**

Environmental engineer and post-graduated in project management. Mr. Oliva has developed more than 10 projects under the VCS, acting as consultant for more than 3 years in carbon credits projects and emission inventories. Mr. Oliva has experience in the implementation of Quality and Environmental Management Systems, and is certified under ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 as internal auditor. Mr. Oliva has also more than 3 year experience in auditing CDM, VCS and GS projects, working for IBOPE' DOE. Mr. Oliva attended the Basic Session (basic overview on the new rules and requirements part of the GS Toolkit version 2.2) and Specialized Session (explanation of new rules including among other Eligibility criterion, PoAs and Grievance Mechanism) on January, 23<sup>th</sup> and 24<sup>th</sup>.

### **Fernando Alarcon Nogueira**

Environmental engineer and post graduated in renewable energies, energy efficiency and distributed generation. Mr. Nogueira has developed studies and carbon footprint certification of goods and services, environmental risk analysis studies and elaboration of greenhouse gas emission inventories. Mr. Nogueira has also experience with elaboration of project design document of CDM projects. Mr. Nogueira is an auditor with experience in CDM and VCS projects.

**8. Verification Protocol**

**Table 1 The Gold Standard Toolkit 2.2, The Gold Standard Requirements 2.2 and related annexes**

| Checklist Question   | Document Reference                  | Validation team comments  | Draft Concl. | Final Concl. |
|--|-------------------------------------|---|--------------|--------------|
| <b>General requirements</b>  |                                     |   |              |              |
| 1. Has the PP (or DOE, when applicable) uploaded the carbon and sustainability reports together with supporting documents into the Gold Standard Registry?                     | The Gold Standard Toolkit 2.2 – 4.5 | CL 01   | CL 01        | Ok           |
| 2. If the project activity is a CDM or JI project, is the Gold Standard verification process conducted at the same time and period under the regular CDM and JI project cycle? | The Gold Standard Toolkit 2.2 – 4.6 | Not applicable.   | Ok           | Ok           |
| 3. Has the DOE selected samples of the monitoring plan? If so, has the DOE justified the selected samples?   | The Gold Standard Toolkit 2.2 – 4.6 | Not Applicable.   | Ok           | Ok           |
| 4. Has the PP made changes since validation/last verification that impact on the claimed emission reductions?  | The Gold Standard Toolkit 2.2 – 4.6 | The PP has not made any changes that impact on the claimed emissions reductions.                                    | Ok           | Ok           |
| 5. Has the project activity suffered any changes that might impact the Gold Standard qualification of the project?   | The Gold Standard Toolkit 2.2 – 4.6 | The project activity has not suffered any changes that might impact the Gold Standard qualification of the project. | Ok           | Ok           |
| <b>Site visit</b>  |                                     |   |              |              |
| 1. In case of a large scale project, has the DOE conducted a site visit?   | The Gold Standard Toolkit 2.2 – 4.7 | Not applicable.   | Ok           | Ok           |
| 2. In case of small scale project, has the DOE conducted a site visit?   | The Gold Standard Toolkit 2.2 – 4.7 | Yes. The site visit took place on 10/03/2014 to 12/03/2014.   | Ok           | Ok           |
| 2.1. If not, a site visit was required according to Gold Standard requirements?  | The Gold Standard Toolkit 2.2 – 4.7 | Not applicable.   | Ok           | Ok           |

|   |                                       |  |                                    |    |
|---|---------------------------------------|--|------------------------------------|----|
| 2.1.1. If so, has the PP demonstrated with appropriate justification and requested less frequent visits?  | The Gold Standard Toolkit 2.2 – 4.7   | Not applicable.  | Ok                                 | Ok |
| 2.1.1.1. If so, has the previous DOE provided a positive opinion and it was approved by Gold Standard?  | The Gold Standard Toolkit 2.2 – 4.7   | Not applicable.  | Ok                                 | Ok |
| <b>Monitoring GHG reductions and Sustainable Development</b>  |                                       |  |                                    |    |
| 3. Has the PP included in the monitoring report:  | The Gold Standard Toolkit 2.2 – 4.1   |  |                                    |    |
| 3.1. A monitoring table from the PDD and Passport? (Gap analysis report when applicable)  | The Gold Standard Toolkit 2.2 – 4.1   | Yes. The PP included it in Table 05, Table 07, Table 09 and Annex 1<br>CAR 04. | CAR 04                             | Ok |
| 3.2. Data entry sheets of self-monitored parameters?  | The Gold Standard Toolkit 2.2 – 4.1   | Yes, data included in Section D.<br>CAR 02 and CAR 03.<br>CL 02 and CL 03.     | CAR 02<br>CAR 03<br>CL 02<br>CL 03 | Ok |
| 3.3. Remarks on the monitoring process used?  | The Gold Standard Toolkit 2.2 – 4.1   | Yes, remarks were included in Section D.                                       | Ok                                 | Ok |
| 3.4. Current or expected status and future status of the parameters in the table? In addition, has the PP described how it/they is/are monitoring these parameters? | The Gold Standard Toolkit 2.2 – 4.1   | Yes, information were included in Section D.                                   | Ok                                 | Ok |
| 3.5. Other data sources to substantiate PPs' claims?  | The Gold Standard Toolkit 2.2 – 4.1   | Not applicable.  | Ok                                 | Ok |
| 4. Has the PP monitored the sustainability impact of the project activity according to the sustainability monitoring report?  | The Gold Standard Toolkit 2.2 – 2.4.3 | Yes, please see Annex 01.  | Ok                                 | Ok |
| <b>Forward Action Requests (FARs) raised by</b>   |                                       |  |                                    |    |

|  |  |                     |    |    |
|--|--|---------------------|----|----|
| <b>Gold Standard</b>   |  |                     |    |    |
| 1. Has the Gold Standard raised any FAR in the previous desk review? If so, has the PP considered it/them in the current monitoring?               |  | No, not applicable. | Ok | Ok |
| <b>Forward Action Requests (FARs) raised by previous verification</b>  |  |                     |    |    |
| 1. Has the previous DOE raised any FAR to be considered in the current monitoring? If so, has the PP considered it/them in the current monitoring? |  | No, not applicable. | Ok | Ok |

**Table 2 Resolution of Corrective Action /Clarification / Forward Action Requests**

| <b>ITEM</b>   | <b>1</b> | <b>CAR 1</b>  |
|---|----------|---|
| <b>CAR REFERENCE</b><br>(Verification Team)             |          | Section A.4. Technical description of the project<br>Santa Rita Ceramic   |
| <b>Corrective Action Request</b><br>(Verification Team) |          | According to site visit and onsite interview with Project Proponent, only one Hoffmann is part of the GS Project.<br>Please correct it accordingly. |
| <b>ROUND</b><br>(Verification Team)                     |          | 1 <sup>st</sup>   |
| <b>CLIENT ANSWER</b><br>(Client/ Project Participant)   |          | The information was corrected in the report.  |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) |          | Section A.4. Technical description of the project<br>Santa Rita Ceramic   |
| <b>CONCLUSION</b><br>(Verification Team)                |          | Ok. The corrections were done accordingly. CAR closed.  |

| ITEM  | 2 | CAR 2   |
|---|---|---|
| <p><b>CAR REFERENCE</b><br/>(Verification Team)</p> <p><b>Corrective Action Request</b><br/>(Verification Team)</p> |   | <p>Section D.2. Data and parameters monitored<br/>Parameter PRY</p> <p>CEAGRA Ceramic – The total production at 2013 verified on site visit was 9.417,050 Thousands of ceramic units.</p> <p>Antonio Ceramic – The quantity of 16.300 ceramic units (9x19x19 c/8 furos) at 13/09/2013 could not be evidenced during the site visit</p> <p>Eliane Ceramic – The quantity of 10.000 ceramic units type are not listed at 04/05/2013. Moreover, the quantity of 30.000 ceramic units (9x19x19 c/8 furos) at 11/07/2013 could not be evidenced.</p> <p>Santa Rita Ceramic – The following quantities of ceramic units could not be evidenced:</p> <ul style="list-style-type: none"> <li>- 2.000(H-8) at 16/10/2013</li> <li>- 30.000 (PM-6) at 06/01/2014</li> <li>- 3.000 (PM-6) at 11/01/2014</li> <li>- 6.000 (PM-6) at 13/01/2014</li> <li>- 3.600 (9x19x19 c/8 furos) at 20/01/2014</li> </ul> <p>Please correct the items above accordingly.</p> |
| <p><b>ROUND</b><br/>(Verification Team)</p>   |   | <p>1<sup>st</sup></p>   |
| <p><b>CLIENT ANSWER</b><br/>(Client/ Project Participant)</p>   |   | <p>Ceagra Ceramic – The total production of the year 2013 was corrected.</p> <p>Antonio Ceramic – The quantity of 16.300 ceramic units at 13/09/2013 was excluded from Parameter PRY.</p> <p>Eliane Ceramic – The quantity of 30.000 ceramic units was excluded from the monitoring report calculation spreadsheet. The quantity of 10.000 ceramic units was not considered in this monitoring report.</p> <p>Santa Rita Ceramic – The quantities of ceramic units that were not evidenced were excluded.</p> <p>The evidences will be sent to the verification team.</p>   |
| <p><b>REVISED SECTION</b><br/>(Client/ Project Participant)</p>   |   | <p>Section D.2. Data and parameters monitored<br/>Parameter PRY</p>   |

Section E.4. Emission reductions calculation / table

**CONCLUSION**

(Verification Team)

The corrections were done accordingly. CAR closed.

| ITEM                             | 3 | CAR 3  |
|----------------------------------|---|--|
| <b>CAR REFERENCE</b>             |   | Section D.2. Data and parameters monitored   |
| (Verification Team)              |   | Parameter Qrenbiomass  |
| <b>Corrective Action Request</b> |   | Antonio Ceramic – The invoice 62352 from 27/10/2013 (sawdust) could not be evidenced. Moreover, there were two receipts from October 2013 that were not added up in the spreadsheet. |
| (Verification Team)              |   | Eliane Ceramic – The DOF 10562000 from July 2013 was not added up in the monitoring spreadsheet.   |
|                                  |   | Please correct the items above accordingly.  |
| <b>ROUND</b>                     |   | 1 <sup>st</sup>  |
| (Verification Team)              |   | Antonio Ceramic – The quantity of sawdust regarding the invoice 62352 was excluded since it could not be evidenced.  |
| <b>CLIENT ANSWER</b>             |   | Both receipts from October 2013 were not considered in the monitoring report.  |
| (Client/ Project Participant)    |   | Eliane Ceramic - The DOF 10562000 from July 2013 was not considered in the monitoring report.  |
| <b>REVISED SECTION</b>           |   | Section D.2. Data and parameters monitored   |
| (Client/ Project Participant)    |   | Parameter Qrenbiomass  |
|                                  |   | Section E.4. Emission reductions calculation / table   |
| <b>CONCLUSION</b>                |   | Ok, the items were not included in the monitoring report. CAR closed.  |
| (Verification Team)              |   |  |

| ITEM  | 4               | CAR 4   |
|---|-----------------|---|
| <b>CAR REFERENCE</b><br>(Verification Team)             |                 | Section E.5. Comparison of actual emission reductions with estimates in the CDM-PDD   |
| <b>Corrective Action Request</b><br>(Verification Team) |                 | The <i>Table 10. Comparison of values for each ceramic company</i> was not presented in the GS MR.  |
| <b>ROUND</b><br>(Verification Team)                     | 1 <sup>st</sup> |   |
| <b>CLIENT ANSWER</b><br>(Client/ Project Participant)   |                 | The table 10 is located in page 29 of the monitoring report.  |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) |                 | Section E.5. Comparison of actual emission reductions with estimates in the CDM-PDD   |
| <b>Corrective Action Request</b><br>(Verification Team) |                 | <p>According to table 10 of the Monitoring Report, there is a significant difference between thermal energy generated (TJ) per 1,000 pieces of VCS PD and in the monitoring period.</p> <ul style="list-style-type: none"> <li>• Antonio Ceramic: - 61%;</li> <li>• CEAGRA Ceramic: -30%;</li> <li>• Ceará Ceramic: -69%.</li> </ul> <p>Please explain this difference.<br/>CAR not closed.</p>   |
| <b>ROUND</b><br>(Verification Team)                     | 2 <sup>nd</sup> |   |
| <b>CLIENT ANSWER</b><br>(Client/ Project Participant)   |                 | The weighted average was calculated using the total of months differently of the period analyzed. The information in Table 10 was corrected and the evidence will be sent to the verification team. Also, although there is some difference in the TJ per 1,000 pieces between the current monitoring period and the baseline, the variation of the whole project, including the 5 factories is 85%. This is justified by the biomass purchased by Santa Rita that is distributed to the other ceramic factories. |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) |                 | E.6. Remarks on difference from estimated value in the PDD<br>Table 10  |

|  |   |
|--|---|
| <b>CONCLUSION</b><br>(Verification Team) | Ok. The correction were done accordingly, CAR Closed. |
|--|---|

| ITEM  | 5 | CL 1   |
|---|---|--|
| <b>CL REFERENCE</b><br>(Verification Team)              |   | The Gold Standard Registry   |
| <b>Clarification</b><br>(Verification Team)             |   | Please provide evidence that the carbon and sustainable report tighter with supporting document were uploaded into the Gold Standard Registry.     |
| <b>ROUND</b><br>(Verification Team)                     |   | 1 <sup>st</sup>  |
| <b>CLIENT ANSWER</b><br>(Client/ Project Participant)   |   | The evidence will be sent to the verification team.  |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) |   | The Gold Standard Registry   |
| <b>CONCLUSION</b><br>(Verification Team)                |   | The evidence was provided. However the deadline for the uploading into the Gold Standard Registry was not met. Please see FAR 1. The CL is closed. |

| ITEM  | 6 | CL 2   |
|---|---|--|
| <b>CL REFERENCE</b><br>(Verification Team)  |   | Section D.2. Data and parameters monitored<br>Parameter PRy  |
| <b>Clarification</b><br>(Verification Team) |   | Please clarify why there was no production in February 2014 for the whole project activity.                      |
| <b>ROUND</b><br>(Verification Team)         |   | 1 <sup>st</sup>  |
| <b>CLIENT ANSWER</b>                        |   | When the first version of the monitoring report was concluded there weren't information of February 2014 because |

|   |   |
|---|---|
| (Client/ Project Participant)                           | the ceramic factory had no time to insert the data regarding this month. Now, for the second version, the production for the whole project activity regarding February 2014 was included in the report. |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) | Section D.2. Data and parameters monitored<br>Parameter Pry<br>Section E.4. Emission reductions calculation / table   |
| <b>CONCLUSION</b><br>(Verification Team)                | OK. The clarification was accepted. CL closed.  |

| ITEM  | 7 | CL 3  |
|---|---|---|
| <b>CL REFERENCE</b><br>(Verification Team)              |   | Section D.2. Data and parameters monitored<br>Parameter Leakage due to competing uses of biomass'   |
| <b>Clarification</b><br>(Verification Team)             |   | Please clarify the <i>Value(s) of monitored parameter</i> . The values where presented in percentage.<br>Please clarify and provide the calculations for this parameter.  |
| <b>ROUND</b><br>(Verification Team)                     |   | 1 <sup>st</sup>   |
| <b>CLIENT ANSWER</b><br>(Client/ Project Participant)   |   | The calculations of the Parameter <i>Leakage due to competing use of biomass</i> were made according to the UNFCCC General Guidance on leakage in biomass project activities. The leakage was neglected once the calculation showed that the quantity of available biomass in the region was at least 25% larger than the quantity of biomass utilized during the project activity. |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) |   | Section D.2. Data and parameters monitored<br>Parameter Leakage due to competing uses of biomass  |
| <b>CONCLUSION</b><br>(Verification Team)                |   | OK. The clarification was accepted. CL closed.  |

| ITEM                | 8 | FAR 1                                |
|---------------------|---|--------------------------------------|
| <b>CL REFERENCE</b> |   | The Gold Standard Registry and CL 1. |

|   |   |
|---|---|
| (Verification Team)                                     |   |
| <b>Forward Action Request</b><br>(Verification Team)    | For the next monitoring period, please ensure to upload the carbon and sustainable before the start of the verification.                            |
| <b>ROUND</b><br>(Verification Team)                     | 2 <sup>nd</sup>   |
| <b>CLIENT ANSWER</b><br>(Client/ Project Participant)   | Ok, for the next monitoring period Sustainable Carbon will ensure to upload the carbon and sustainable report before the start of the verification. |
| <b>REVISED SECTION</b><br>(Client/ Project Participant) | Not applicable.   |
| <b>CONCLUSION</b><br>(Verification Team)                | Ok. The FAR shall be revised in the next monitoring period.   |