



Voluntary Carbon Standard Version 2007.1

Verification Report

Project Number: 8000376397 09/459

Name of Verification company:	Date of the issue:																																
TÜV NORD CERT GmbH	November 06 th , 2009																																
Report Title:	Approved by:																																
Final Verification Report Kamiranga Ceramic Fuel Switching Project	Mr. Eric Krupp (FA)																																
Client:	Project Title:																																
Carbono Social Serviços Ambientais Ltda.	Kamiranga Ceramic Fuel Switching Project																																
Summary:																																	
Carbono Social Serviços Ambientais Ltda. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the project: "Kamiranga Ceramic Fuel Switching Project", with regard to the relevant requirements for CDM project activities. The project reduces GHG emissions due to switching non-renewable to renewable biomass fuel for end-user thermal energy generation. This verification covers the period from 2006 January 01st, 2008 to July 30rd, 2009 (including both days). In the course of the verification 1 Corrective Action Requests (CAR) and 3 Clarification Request were raised and successfully closed. Furthermore 0 FAR was raised. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the VCS PD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant. As a result of this verification, the verifier confirms that: - all operations of the project are implemented and installed as planned and described in the validated project design document. - the monitoring plan is in accordance with the applied approved CDM methodology, AMS-I.E: Switch from non-renewable biomass for thermal applications by the user - Version 01, February 1st 2008 onwards - the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately. - the monitoring system is in place and functional. The project has generated GHG emission reductions. As the result of the 1st periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:																																	
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Work carried out by:	Number of pages:																																
Arlete Martini (TM) Gilberto Andrade (TM) Rainer Winter (TL) Alexandra Nebel (TR)	16																																

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1 Introduction

1.1 Objective

The purpose of this verification, by independent checking of objective evidence, is as follows:

- to verify that the project is implemented as described in the project design document;
- to confirm that the monitoring system is implemented and fully functional to generate voluntary carbon units (VCUs) without any double counting, and
- to establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification of this VCS project is based on the VCS project description^{/VCS PD/}, the monitoring report^{/MR/}, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore publicly available information was considered as far as available and required.

The TÜV NORD JI/CDM CP has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

1.3 VCS project Description

Located in São Miguel do Guamá, Pará State, this project comprises one enterprise, Kamiranga Ceramic, which produces structural ceramic devices like bricks. The project activity involves fuel switching from native firewood from Amazonian biome to sawdust and forest residues to feed the ceramic kilns; thus GHG emission reduction is achieved. Others types of renewable sources of biomass can be applied during the project activity, such as elephant grass that could be cultivated in pasture or degraded areas, in which there is no vegetation to be deforested. Rice husk and açai pits are also available and can be considered as alternatives.

Before the switching of the fuel, Kamiranga Ceramic consumed 1,944 tonnes tonnes of native firewood per month to produce 2,400 tonnes of ceramic pieces per month. Until 2007, before the project activity, the ceramic used one “Paulista” kiln and nine “Caieiras” kilns and since the beginning of 2008 with the configuration of two “Paulista” Kilns and one “Hoffman” kiln. The ceramic started its activities with the renewable biomass in January 1st 2008.

The Kamiranga Ceramic is now consuming around 334 tonnes of sawdust monthly to produce around 2,780 tonnes of ceramic pieces per month.

The GHG emission reduction for the considered crediting monitored period is 48,068 tCO₂e^{/XCS3/}.

1.4 Level of assurance

The verification report is based on VCS PD, Monitoring Report, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. The verification opinion is assured provided the credibility of all above.

2 Methodology

The verification of the project was carried out from November 2008 to July 2009.

Preparations: 2009-07-20 to 2009-07-26

On-site visit: 2009-07.27

(Draft) Reporting: 2009-08-20

(Final) Reporting: 2009-11-06

The verification consisted of the following steps:

- A desk review of the VCS PD^{/VCS PD/} and supporting documents with the use of the relevant sections of a customised protocol according to the VCS 2007.1;
- A desk review of the Monitoring Report^{/MR/} and additional supporting documents which the client submitted. The relevant sections of the above-mentioned customised protocol according to the VCS 2007.1 were used.
- Verification audit planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer,
- Verification reporting (Draft Verification Report and Final Verification Report).

The criteria of this verification include the relevant rules and steps as set out in the VCS.

3 Verification Findings

3.1 Remaining issues, including any material discrepancy, from previous validation

There are no pending CARs and CLs issued in the course of the validation that still needs to be properly addressed to get closed.

3.2 Project Implementation

The project consists of a fuel switch from non-renewable biomass to renewable biomass in the ceramic facility. The use of non-renewable native wood will be substituted by renewable biomass of different kinds as can be seen in the table below.

Table 3-1: Type of biomass

Renewable biomass applied	Description of sustainability
Sawdust	The sawdust that may be used in the project activity is originated from sawmills industries which utilizes wood coming from sustainable forest management. As the sawdust is an industrial residue it falls therefore under the renewable biomass criteria of the applied methodology. Sustainability will be provided by the assurance of the quantities and origin of the sawdust used via the check of the invoices.
Biomass that may be applied	Description of sustainability
Elephant grass	This is an alternative which is seen with potential for the future. If adopted by the project activity, the elephant grass cultivation should follow sustainable management methodologies. The elephant grass will be exclusively cultivated for the purpose to supply fuel to the project activity. The ceramic owner will be responsible to maintain or to evidence the sustainability of the production. Until now the ceramic did not use elephant grass for their project. The evidence of sustainability will be provided by the assurance of the quantities and origin of the elephant grass and by the control of the quantities involved.
Rice Husk	This is another alternative which is seen with potential for the future due to the local production of rice. Rice husk is sustainable biomass because the rice production facilities require regular plantation of rice to maintain the production. Until now the ceramic did not use rice husk for their project. The evidence of sustainability will be provided by the evidences of the sustainable management origin of the rice husk and by the control of the quantities involved.
Açaí Pits	Açaí pit is another alternative as long as the state of Pará is the biggest producer of açaí (Euterpe oleraceae) in Brazil. The pits are easily found, especially in Belém, which is the major consumer of açaí pulp in the State of Pará. Açaí pit is sustainable biomass because açaí pulp production require regular plantation of açaí to maintain the production. The evidence of sustainability will be provided by the assurance of the quantities and origin of the açaí pits used via the check of the invoices.

For the project implementation the ceramic owner had to deal with different kind of barriers, such as:

Table 3-2: Assessment of Barrier Analysis

☐	No barrier parameters are used for additionality justification
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☒		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
Technical	Kilns adjustment to the new machineries. Use of the new mechanical burners. Using the new fuel, changing of working process Storage of the renewable biomass.	/FAE/ /DOF/ /IM01/	☒	Technical adjustments and modifications in the kilns and in the overall ceramic production could be evidenced during on-site visit and were crosschecked by invoices for the new technical equipments /FAE/. The ceramists had to learn how to manage and control the logistics for the new machinery in order to get the most efficient production. Moreover, it was necessary to train the staff responsible for the kilns feeding as well as overall operation of the ceramic. The difficulties that occurred during the switch of the biomass, as described by the PP, could be evidenced during the interviews with workers and by checking the training plans, loss of biomass and loss of production during the experimental period. As the new process is different than the baseline a technical barrier was faced by this project The technical barrier has been verified and found to be significant for the additionality of the small-scale project activity.
Financial investment costs	Kiln entrance adjustment Equipment acquisition New storage shed Maintenance costs	/FAE/	☒	All the sources of investment costs could be verified during on-site visit. All invoices have been checked by the validation team. The financial barrier due to investment cost has been validated and found not to be significant for the additionality of the small-scale project activity as no financial analysis has been carried out.

During the verification a site visit was carried out. On the basis of this site visit and the reviewed project documentation it could be confirmed that the realized technology, the project equipments as well as the monitoring and metering equipment has been implemented and operated as described in the VCS PD and are in line with the VCS 2007.1 Standard.

It was confirmed that the actual project activity was implemented in accordance with the validated VCS PD. Besides of that 01 CAR was raised and successfully closed.

General	CAR 1
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The description of the small scale project in section A.2 is incomplete. All information about the project (the number of kilns, the amount of wood used, the amount of ceramic devices and other information) should be included. Section A.2
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The description of the small scale project activity was rechecked and information regarding number of kilns, amount of wood used, and amount of ceramic units was added.

General	CAR 1
DOE Assessment #1 <i>In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Ok. All the necessary information was given. The description of the small scale project is complete now.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

3.3 Completeness of Monitoring

The monitoring has been carried out in accordance with the VCS 2007.1 standard. The responsibilities identified during the validation have been confirmed and all parameters to be monitored have been verified and crosschecked.

Table 3-3: Responsibilities

Responsibility for the Monitoring	Area
Mr. Márcio Monteiro, Employee of Kamiranga Ceramic	registration monitoring measurement reporting

Table 3-4:

Parameter monitored				Description of measurement and monitoring methods.	/REF/ for cross-check
Name	Unit	Value	/REF/ MR		
Q _{renbiomass} Amount of renewable biomass employed	tonnes per month	January 1 st 2008 to June 30 2009: Total of 6,174 tonnes of sawdust	/Table 2, page 19/	Will be measured by the project proponent, monthly. The parameter will be monitored through the weight indicated in the buying receipts of the renewable biomasses providers. The specific gravity of each renewable biomass can be used for unit conversion	/OSV/

$f_{NRB,y}$ Fraction of native wood used in the absence of the project activity in year y.	%	92,28	/B.4/	Fraction of native wood used in the absence of the project activity has been identified by 92.28. The source was verified to be reliable. The value will be monitored yearly and checked in each verification period. This value includes also the amount of non-renewable wood saved under similar project activities in the same biome (Amazonian) ^{/XCS1/} . The sources applied are literature and project database.	/OSV/
PR_y Production of ceramic devices	tonnes per month	January 1 st 2008 to June 30, 2009: Total of 45,672 tonnes of pieces	/B.4/	The measurement will be done by an internal control sheet monitored by the project proponent, which will be filled daily. The production is a representative sample to ensure that all appliances are still in operation ^{/IMO1/} .	/OSV/
Origin of renewable biomass	-	-	/OSV/	Controlled annually by the ceramic owner. The project participant will only buy renewable biomass from the list of its reliable supplier. Depending on the renewable biomass type different criteria must be applied as stated in section 3.1 of this report. If the ceramic obtain their biomass from other suppliers than listed now in the PD they will check the origin of the biomass and provide evidence to the verification team.	/OSV/
Renewable biomass surplus	tonnes or m ³	as in ^{/MR/}	/PDD/ ^{/MR/}	In order to estimate the leakage emission of the renewable biomass the project participant will monitor the renewable biomass surplus in the specific region of the project activity, yearly. The measurement will be based on national and internal sources. During validation leakage could not be identified so far. According to the general guidance on leakage EB 28 a possible source of leakage is the competing use of biomass. This is the case when the project uses more than 25% of the biomass available in the region. With proper references the PP could show, that there is more than 75% of each biomass available on the marked not used for the project activity ^{/VCS PD/} .	^{/MR/} ^{/BRITO/} ^{/CENBIO/} ^{/IBGE/}
/Leakage of non-renewable biomass	tCO ₂ e	0,0	/B.4/	All three sources of leakage predicted in the applied methodology will be monitored, annually. It will be provided information regarding the non-renewable biomass availability in the specific project region by official statistic data and national surveys.	/OSV/

The monitoring equipments are controlled based on common industrial practice of the ceramic sector. An internal verification will be performed to ensure that the monitoring plan is being followed accordingly with the proposed procedure stated in the VCS PD.

3.4 Accuracy of Emission Reduction Calculations

The approved CDM baseline and monitoring methodology Category AMS-I.E: Switch from non-renewable biomass for thermal applications by the user - Version 01, February 1st 2008 onwards, is applied to the project activity.

GHG emission reduction is calculated as baseline emissions minus project emissions minus leakage emissions. As no project and leakage emissions are identified according to the applied methodology, baseline emissions are equal to the amount of emission reduction. Emission reduction is calculated through the estimated value of native wood that would be consumed in the absence of the project activity in year y (according option “b” of applied methodology as stated in section 3.3 of this report) multiplied by the fraction of non-renewable biomass (wood) used in the absence of the project activity in year y multiplied by the Net Calorific Value of non-renewable biomass multiplied by the EF of the projected fossil fuel adopted. The approach used for the emission reduction calculation was considered to be in accordance with the applied methodology.

It was verified in the course of this verification that the above-mentioned methodology has been correctly and accurately applied in calculating the total emission reductions and the emission reduction calculation is accurate and conservative.

3.5 Quality of Evidence to Determine Emission Reductions

The project proponent as evidence of the calculations required to determine the emission reductions submitted several documents in addition to those collected during the On-Site Visit. Refer to Table 5-1.

The evidences were assessed and considered as of sufficient quantity and appropriate quality.

The Verification Team raised 02 CLs which were properly addressed and closed.

General	CL 01
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Please clarify why there is no correlation between the mass of sawdust burned and the mass of pieces produced as indicated in item B.4 for PRy and Qrenbiomass.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	There is no regular correlation between the mass of sawdust burned and the mass of pieces produced because it is considered the amount of biomass acquired not burned in the period. Therefore, the parameter Qrenbiomass includes the amount of biomass that is also stocked. However, it does not modify the amount of emission reductions.
DOE Assessment #1 <i>In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Not ok. There is straight relation between the quantity of consumed sawdust and the produced quantity. So, please, explain what is the quantity of sawdust burned for the informed production. {Table 2 - Production and biomass predicted and monitored at Kamiranga Ceramic/MR, where was informed: Qrenbiomass = 100tonnes, VCUs Estimatives (Biomass consumption per year Tonnes = 4008.00) and VCS PD page 9 - Qrenbiomass}.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	There were mistakes in the calculation of Qrenbiomass, but they were corrected. Furthermore, the amount of biomass in table 2 (Qrenbiomass – 100 tons) was rechecked since it should be 334 tons to produce 2,780 tons of ceramic units.
DOE Assessment #2 <i>In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Ok. The correction was done and the given information is correct now. Documents were corrected as well.

General	CL 01
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

General	CL 02
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Please clarify how is possible that different quantities of sawdust burned to produce exactly the same quantity of ceramic pieces as indicated in Table B.4 of MR from September 2008 to December 2008.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	There is no regular correlation between the mass of sawdust burned and the mass of pieces produced because it is considered the amount of biomass acquired not burned in the period. Therefore, the parameter Qrenbiomass includes the amount of biomass that is also stocked. However, it does not modify the amount of emission reductions.
DOE Assessment #1 <i>In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Not ok. There is straight relation between the quantity of consumed sawdust and produced quantity. So, please, explain what is the quantity of sawdust burned for the informed production. {Table 2 - Production and biomass predicted and monitored at Kamiranga Ceramic/MR, where was informed: Qrenbiomass = 100tonnes, VCU's Estimatives (Biomass consumption per year Tonnes = 4008.00) and VCS PD page 9 - Qrenbiomass}.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	There were mistakes in the calculation of Qrenbiomass, but they were corrected. Furthermore, the amount of biomass in table 2 (Qrenbiomass – 100 tons) was rechecked since it should be 334 tons to produce 2,780 tons of ceramic units. Moreover, in some months the ceramic company produced a little bit more than it is allowed by the Operation License; however, the parameter PRy was limited by the amount allowed by its operation license.
DOE Assessment #2 <i>In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Ok. The correction was done and the given information is correct now. Documents were corrected as well.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

3.6 Management and Operational System

The management and operational system of the project is suitable.

An operational structure was established with responsibilities identified.

Staff training plan was clear; training records were available.

The quality management and the procedures to address errors and non-conformances were clearly defined^{/VCS PD/}.

The Validation Group raised and successfully closed 01 CL.

General	CL 03
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General	CL 03
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Please clarify the extraction of 3,600m ³ of clay when the License mentions the value of 3,000m ³ .
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Extraction of clay is in accordance to operation license. According to the ceramic owner, the amount consumed of clay is 3000 m ³ per month instead of 3600 m ³ .
DOE Assessment #1 <i>In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Ok. The Monitoring Report was corrected. The new information is in line with the license.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

4 Verification Conclusion

Carbono Social Serviços Ambientais Ltda has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the project “*Kamiranga Ceramic Fuel Switching Project*”, with regard to the relevant requirements for CDM project activities. The project reduces GHG emissions due to switching non-renewable to renewable biomass fuel for end-user thermal energy generation. This verification covers the period from 2006 January 01st, 2008 to July 30rd, 2009 (including both days).

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- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved CDM methodology ,ie, AMS-I.E: Switch from non-renewable biomass for thermal applications by the user - Version 01, February 1st 2008 onwards
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
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As the result of the 1st periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows: Emission reductions:

Emission reductions:	CO ₂ [t CO ₂]	CH ₄ [t CH ₄]	N ₂ O [t N ₂ O]	HFCs [t HFC]	PFCs [t PFC]	SF ₆ [t SF ₆]	Sum [t CO ₂ e]
2008	31,156	-	-	-	-	-	31,156
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TOTAL:							48,068

Essen, 2009-11-06



Rainer Winter
TÜV NORD JI/CDM CP
Verification Team Leader

Essen, 2009-11-06



Eric Krupp
TÜV NORD JI/CDM CP
Final approval

5 References

Table 5-1: Documents provided by the project proponent

Reference	Document
/BRITO/	BRITO EO. Estimativa da produção de Resíduos na Indústria Brasileira de Serraria e Laminação de Madeira. Rev. da Madeira. v.4. n.26. 1995, pp. 34-39.
/CENBIO/	CENTRO NACIONAL DE REFERÊNCIA EM BIOMASSA - CENBIO. Panorama do potencial de biomassa no Brasil. Brasília; Dupligráfica, 2003. 80 p.
/ECT/	Employee's certificates for training realized regarding process for the project activity.
/IBGE/	IBGE. Extração Vegetal e Silvicultura 2007. Available at: < http://www.ibge.gov.br/estadosat/temas.php?sigla=pa&tema=extracaovegetal2007 >. Visited on April 27th, 2009
/ML/	Municipal License - Validity: 31/12/2009
/OL1/	Operation License no 2676/2009 (SEMA) Validity: 23/06/2012 Registration no 005/2007.
/OL2/	Operation License no 2685/2009 Validity: 10/02/2011 CEPROF: SEMA –PA – Registration no 2443
/OL3/	Water License obtained on 13/10/2008.
/PFT/	Contract signed between Carbono Social Serviços Ambientais Ltda. and Kamiranga Ceramic stating their ownership of the project.
/PRO/	Signed BRTÜV proposal issued for the project activity. It is clear stated the date of contracting for the validation and verification process. Date 2007/12/19.
/VCS PD/	Project Design Document “Kamiranga Ceramic Fuel Project” - Version 01 – July 16th, 2009.
/VCS PD/	Project Design Document “Kamiranga Ceramic Fuel Project” - Version 02 – August 31 st , 2009.

Reference	Document
/VCS PD/	Project Design Document "Kamiranga Ceramic Fuel Project" - Version 2.3 – October 27th, 2009.
/MR/	Monitoring Report "Kamiranga Ceramic Fuel Switching Project" Version 01 – July 17 th , 2009.
/MR/	Monitoring Report "Kamiranga Ceramic Fuel Switching Project" Version 02 – August 31 st , 2009.
/MR/	Monitoring Report "Kamiranga Ceramic Fuel Switching Project" Version 03 – August 31 st , 2009.
/MR/	Monitoring Report "Kamiranga Ceramic Fuel Switching Project" Version 3.1 – September 29 st , 2009.
/OSV/	Information/Observation during On-Site Visit including ceramic pieces production and renewable biomasses used. Appropriate records retained by the Verification Team as evidence of the On-Site Visit.
/PFT/	Contract signed between Carbone Social Serviços Ambientais Ltda and Kamiranga ceramic stating their ownership of the project.
/XCS1/	Calculation spreadsheet of baseline study and emission reduction Version 01
/XCS1/	Calculation spreadsheet of baseline study and emission reduction Version 02
/XCS1/	Calculation spreadsheet of baseline study and emission reduction Version 03
/XCS1/	Calculation spreadsheet of baseline study and emission reduction Version 2.3 - October 27th, 2009.
/XCS2/	MP Kamiranga – period 01-01-08 to 30-06-2009 Version 1
/XCS2/	MP Kamiranga – period 01-01-08 to 30-06-2009 Version 2
/XCS2/	MP Kamiranga – period 01-01-08 to 30-06-2009 Version 3
/XCS2/	MP Kamiranga – period 01-01-08 to 30-06-2009 Version 3.1 – 2009-09-29

Table 5-2: Background investigation and assessment documents

Reference	Document
/AMS-I.E./	AMS-I.E: Switch from Non-Renewable Biomass for Thermal Applications by the User, Version 01, February 1 st , 2008.
/GHG Protocol/	GHG Protocol for Project Accounting 2005.
/IPCC-GP/	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
/IPCC/	2006 IPCC Guidelines for National Greenhouse Gas Inventories: General Guidance and Reporting
ISO 14064-1:2006	Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
ISO 14064-2:2006	Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.
ISO 14064-3:2006	Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions
ISO 14065:2007	Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition
/KP/	Kyoto Protocol (1997)
/CONAMA 279/	Resolution CONAMA 279 (2001) – Environmental National Board
/VCS/	Voluntary Carbon Standard Program Guideline 2007.1.

Table 5-3: Websites used

Reference	Link	Organization
/MCT/	http://www.mct.gov.br	Ministério da Ciência e Tecnologia – Technology and Science Department
/UNFCCC/	http://unfccc.int	United Nations Framework Convention on Climate Change
/VCS/	http://www.v-c-s.org	Voluntary Carbon Standard

Reference	Link	Organization
/DNPM/	http://www.dnpm.gov.br	National Department of Mineral Production

Table 5-4: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Mr. Sigifério Alves de Oliveira Owner of Kamiranga Ceramic Mr. Mario Monteiro da Cruz Employee of Kamiranga Ceramic and responsible for monitoring. Flávia Yumi Takeuchi - Carbono Social Serviços Ambientais Ltda - Technical Coordinator Thales Andrés Carra - Carbono Social Serviços Ambientais Ltda - Technical Analyst	- Desk review findings - General aspects of the project - Project design, Commissioning and implementation - Technical equipment and operation of the project - Performance of the project - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring and measurement equipment - QA/QC Testing and calibration procedures - Monitored data management - Data quality, archiving and reporting procedures - Data uncertainty and residual risks - GHG calculation - Procedural aspects of the verification

Table 5-5: List of interviewed people

Reference	Mol ¹		Name	Organization / Function
/IM01/	V	☒ Mr. ☐ Ms.	Sigifério Alves de Oliveira	Owner of Kamiranga Ceramic
/IM01/	V	☒ Mr. ☐ Ms.	Márcio Monteiro da Cruz	Employee of Kamiranga Ceramic and responsible for monitoring
/IM01/	E, V	☐ Mr. ☒ Ms.	Flávia Yumi Takeuchi	Carbono Social Serviços Ambientais Ltda - Technical Coordinator
/IM01/	E, V	☒ Mr. ☐ Ms.	Thales Andrés Carra	Carbono Social Serviços Ambientais Ltda - Technical Analyst

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)