



Voluntary Carbon Standard Version 2007.1

Project Number: OS 5836 09/177

Verification Report:

Name of Verification company:	Date of the issue:						
TÜV NORD CERT GmbH	May 27 th , 2009						
Report Title:	Approved by:						
Draft Verification Report Gomes de Mattos Ceramic	Mr. Eric Krupp (FA)						
Client:	Project Title:						
Carbono Social Serviços Ambientais Ltda.	Gomes de Mattos 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: <i>"Gomes de Mattos Ceramic Fuel Switching Project"</i>, 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 2006-05-01 to 2009-04-30 (including both days). In the course of the verification 13 Corrective Action Requests (CAR) and 3 Clarification Request (CR) were raised and successfully closed. Furthermore 0 FARs are raised to improve the monitoring system in the future. 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:							
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]
2006	32,582	-	-	-	-	-	32,582
2007	43,985	-	-	-	-	-	43,985
2008	52,101						52,101
2009	17,936						17,936
TOTAL:							146,604
Work carried out by:		Number of pages:					
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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 Crato, Ceará State, this project comprises one enterprise, *Gomes de Mattos Ceramic*, which produces structural ceramic devices like bricks with 8 orifices, bricks with 6 orifices, small flagstone and roof tiles. The project activity involves fuel switching from native firewood from Caatinga biome to wood from sustainable forest management plan areas, sawdust, Algaroba wood, residues from cashew tree and babaçu coconut husk; thus GHG emission reduction is achieved. Other types of renewable sources of biomass can be applied during the project activity, such as municipal garden's residues and elephant grass provided from management areas.

Before the replacement of the biomass, Gomes de Mattos Ceramic utilized two Hoffman kilns to produce ceramic devices for the local market. The fuel employed in the firing process was fossil fuel, mainly heavy oil. Due to the reduction of fossil fuel availability and the increase of prices, the fuel was gradually substituted by native wood. It was utilized 1,900 m³ of native wood monthly to feed the two "Hoffman" kilns and one "Câmara" kiln.

The total replacement occurred in May 2006, and now, *Gomes de Mattos Ceramic* was consuming 18 tonnes of wood from management areas (Eucalyptus), 563 tonnes of native wood from management areas, 128 tonnes of Algaroba wood, 5 tonnes from Babaçu coconut husk, 105 tonnes of cashew tress residues and 5 tonnes of sawdust

monthly of each biomass to maintain the produce of 1,478,000 pieces per month, using the same kilns with some modifications.

Due to the project activity investments were necessary to maintain the facility productions, such as: new mechanical burners to feed the kilns and other equipments, adjustments in the kilns entrance before adapted to the native firewood fuel and construction of a shed to store the renewable biomass.

The project contributes to the sustainable development as due to its activity it will: diversify and improve sources of thermal energy generation, make possible new renewable biomass thermal energy generation technologies to be applied in the ceramic sector or other similar process, reuse biomass waste material, utilize renewable sources of biomass for thermal energy generation and contributes to the local biome preservation.

The GHG emission reduction for the considered crediting period is 146,604 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 on November 2008 to May 2009.

Preparations: 2008-10-06 to 2008-10-07

On-site validation: 2008-10-08

(Draft) Reporting: 2009-04-29

(Final) Reporting: 2009-05-25

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 CRs issued in the course of the validation that still needs to be properly addressed to get closed. Before issuance of the final verification report, these CARs and CRs raised during the validation must be sufficiently justified.

3.2 Project Implementation

The project consists of the fuel switching in the ceramic facility, with the substitution of unsustainable native firewood to wood from sustainable forest management plan areas, sawdust, Algaroba wood, residues from cashew tree and babaçu coconut husk. For the project implementation the ceramic owner had to deal with different kind of difficulties, such as:

- Technological
 - Kilns adjustment – adjustments in the kilns entrances were necessary to the correct fit of the machinery, they needed to be reduced, and the ash-pit of the furnace had to be closed. Without the adjustments a significant lost of thermal energy would occur. The adjustments could be evidenced during the On-site visit as well as invoices and sales receipts^{/FAE/}
 - Sustainable Forest Management Plan – A management plan had been elaborate for the areas that supply renewable wood to the ceramic. The elaboration of these plans requires an intensive study involving the correct species to be planted, the cutting tree periods, the amount allowed to be cut, etc, demonstrating the real need of technical information and specialized professionals to execute these procedures^{/DOFs/}.
 - Use of the new fuel – During the fuel switching the ceramic facility had to deal with the difficulty of establishing the total amount of new fuel necessary to get the proper kiln temperature. Due to this reason the ceramic pieces get cracked or altered its final colour. It was evidenced that the ceramic production decays significantly during the initial fuel switching period^{/IM01/}.

The technical barrier has been validated and found to be significant for the additionality of the small-scale project activity.

- Financial (investment costs)
 - Kilns firing entrance adjustments – Although the price for the kilns adjustments are small it is also considered as a barrier^{/FAE/}.
 - Equipment acquisition – 2 mechanic burners, pyrometers, thermocouples, computers for control, cables, switchers and plug were acquired by the ceramic, that besides this investments costs that are costs with its maintenance^{/FAE/}.
 - New storage shed – a shed was constructed in order to store the biomass and keep it dry (mainly sawdust and babaçu coconut husk)^{/FAE/}.

The financial barrier due to investment cost has been validated to be true but found not to be significant for the additionality of the small-scale project activity as no financial analysis has been carried out.

Another barrier has been addressed that might be faced in the future:

- Increase in the renewable biomass price due the upcoming demand – As the use of renewable biomasses in the ceramic sector is an innovation the future demand of these fuels is difficult to foresee. Although there is currently a great amount of these biomasses available, there is a possibility that the prices will increase.

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

Despite of that, the actual project activity was implemented in accordance with the validated VCS PD. Besides of that, 4 CARs were raised and successfully closed.

CAR/CR	Reference	Summary of project owner response	Revised sections (as applicable)	Conclusion
CAR 1 In all document (PD and MR) the standard is VCS 2007.1 instead of 2007 only.	/MR/	It was displaced	All MR	Ok, correction was done accordingly.
CAR 2 In all baseboard, there is the name of other project. Please correct.	/MR/	It was corrected	All MR	Correction was done accordingly. CAR is closed.
CAR 3 The project name is different from VCS PD.	/MR/	It was corrected.	All MR	Ok, it is correct now. CAR is closed.
CAR 4 The MR version in item A.1 is different from the cover. Please correct.	/MR/ section A.1	It was corrected.	Section A.1	Ok, versions are the same now. CAR is closed.

Minor change:

- Put all references in subscript form.

Minor change was done accordingly.

3.3 Completeness of Monitoring

Gomes de Mattos Ceramic Ceramic will be responsible for monitoring the pertinent parameters as described in VCS PD. The roles and responsibilities are clearly defined. Mr. Edilberto da Silva Rocha, ceramics' director, he is responsible for monitoring the pertinent data for the project activity. The monitored parameter could be evidenced as follows:

- Amount of renewable biomass employed (tonnes per month) - measured by the project developer, monthly. The parameter will be monitored through the weight indicated in the buying receipts of the renewable biomasses providers. These values will be crosschecked with internal records on biomass they received. The specific gravity of each renewable biomass can be used for unit conversion^{/WEB1/}.
- Fraction of native wood used in the absence of the project activity has been identified by 96.7%. The source could be verified with to be reliable^{/WEB2/}. The value will be monitored yearly in each verification period. This value includes also the amount of non-renewable
- Production of ceramic devices (tonnes) - controlled by the project developer, monthly – The ceramic maintain an internal spreadsheet for the production controlling that is fed daily. The QAQC procedure consists of a rigorous register of the daily production. The ceramic must have an internal control of the production for the internal financial balance^{/IM01/}.
- Origin of the Renewable biomass - controlled by the ceramic owner, annually. 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 state 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.
- Renewable biomass surplus (tonnes or m³) – 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 market not used for the project activity^{/VCS PD/}.
- Leakage of non-renewable biomass (tCO₂e) – 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.

The monitoring equipments are perfectly equilibrated based on the INMETRO Standard (Brazilian institute for metrology and calibration). An internal audit will be performed twice a year to ensure that the monitoring plan is being followed according the proposed in the VCS PD.

However 5 CARs and 2 CRs were raised and successfully closed.

CAR/CR	Reference	Summary of project owner response	Revised sections (as applicable)	Conclusion
CAR 5 In BfY parameter, the data unit is different from the value data. Please correct.	/MR/ Section B.3	PP Response 1 It was corrected.	Section B.3	See CAR 24 in VCS PD.
		PP Response 2 It was corrected.	Section B.3	Ok, it is correct now. CAR is closed.
CAR 6 fNRB value is different from VCS PD.	/MR/ Section B.4	PP Response 1 It was corrected.	Section B.4	See CAR 22 in VCS PD.
		PP Response 2 It was corrected.	Section B.4	Ok, fNRB is correct now. CAR is closed.
CAR 7 In Qrenbiomass parameter, data unit is informed per month, and in VCS PD the same is informed per year and both have the same value. Please, correct. And in MR, this value must be in accordance with the biomass employed in the period of the monitoring.	/MR/ Section B.4	It was corrected	Section B.4	Ok, the values are the same informed in the VCS PD. CAR is closed.
CAR 8 In table 4, the emission reduction period is wrong. Please correct.	/MR/ Section B.6	It was corrected.	Section B.6	Ok, the emission reduction period was corrected. CAR is closed.
CAR 9 In table 3, thermal energy is different from VCS PD, and some other values from biomass consumption is also different.	/MR/ Section B.6 and MR Calculation	PP Response 1 Thermal energy from VCS PD was corrected. The values of biomass consumption were corrected as well.	/MR/ Section B.6 and MR Calculation	Not ok. Thermal energy is still different for VCS PD (VCUs Estimative spreadsheet).

		PP Response 2 No corrections were required.	/MR/ Section B.6 and MR Calculation	Ok, it was correct. CAR is closed. See CAR 12.
CAR 10 Qrenbiomass: there are no acai pits in this project as mentioned under “value of data”. Furthermore is sawdust not the most used biomass in this project.	/MR/ Section B.4	It was corrected.		Ok, it was excluded the mention about açai pits and about sawdust as the most biomass used in this project.
CAR 11 Origin of renewable biomass: Under description the use of sustainable native wood has not been mentioned. Under QA/QC the evidence on sustainable management of the native wood should be mentioned (DOF).	/MR/ Section B.4	It was mentioned as required.		Ok, the information and the reference about the DOFs were correctly mentioned, so CAR can be closed.

CAR 12 Emission reductions: The table 3 plus its the descriptions is not conclusive. You compare monthly production with the production of three years. Please use the same units and clearly indicate these units in the table. In the text above it says that the thermal energy for thousand of pieces is higher in the monitoring period. The table gives the same value of 0.005 TJ. What do you want to say with this comparison? Please describe it better. All calculations have been done with tonnes of ceramic pieces, why this value is now in thousand of ceramic pieces? Also in this section I would clearly indicate why the production is so	/MR/ Section B.6	PP Response 1 Table 3 intends to provide evidences that the biomass consumption is enough to maintain the production stated in the MR in comparison with the biomass consumption proposed in the VCS PD. The comparison is made between the Thermal energy generated by the biomass per tonnes of ceramic devices produced. Even comparing the biomass production in 3 year with the monthly production it leads to the thermal energy generated per tonnes of pieces (same unit) . All the modification required was made.		The justification about the thermal energy and a clarification about the table were accepted. But for a better comparison, or the VCS PD biomass consumption value or the MR biomass consumption value must be in the same unit (month or years) There is no unit in Amount of cashew tree and coconut husk.
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different than when compared with the PD.		PP Response 2 An average value of biomass consumption per month was added to table 3. The cashew tree and coconut husk units were added as well.		Ok, a better comparison between the biomass consumption in VCS PD and in MR period regarding the production was done and clarified. CAR is closed.
CAR 13 Excel sheet: In the table that shows the biomass consumption per species and provider some of the values does not apply the respective $p_{biomass}$ factor (e.g. cell G65 and all values for 2009). Please explain what the value 1.25 is used for coming up in each calculation of this table.	VCS MR Calculation	In order to be conservative when the wood invoices are described in volume unit (m3) we applies 1.25 as margin of error. Some of them are without this converter in the table because the values are already in tonnes on the invoices or were converter in the spread sheet provided from the ceramic owner. The referred values (<i>cell G65 and all values for 2009</i>) are already in tonnes, for that reason there is no need of apply $p_{biomass}$ factor for these values.		The justification for the use of $p_{biomass}$ was accepted, once that not every invoices are in the same unit. And about the value of 1.25 as margin error to be conservative was accepted too. So Car is closed.

CR 1 In BFy parameter mention that it is in accordance with the Hoffman kiln efficiency, but what about the Câmara kiln?	/MR/ Section B.3	It was clarified.	Section B.3	Ok, a reference for the Câmara kiln was included.
CR 2 In origin of renewable biomass parameter, in “description of measurement methods and procedures to be applied”, must be informed that the section 2.2 is from VCS PD.	/MR/ Section B.4	It was displaced by section B.6 from MR.	Section B.4	Ok, it was correct. CR is closed.
CR 3 PRy: Under description, please include information why the production has been increased gradually	/MR/ Section B.4	PP Response 1 It was included as required.		Not ok, put a reference for the information about the increase in the local market.
		PP Response 2 It was included as required.		Ok, a reference was correctly added. CR is closed.

Minor change:

- In Qrenbiomass parameter, exclude the phrase: “The project proponent preferentially employs sawdust and açai pits in its burning process, as can be verified in the table below”.
- In Renewable biomass surplus - Value of data, change the item 4.1 for B.5.

Minor changes were done accordingly.**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 estimate 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 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 to determine emission reductions submitted several documents. Refer to Table 5-1.

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

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 erroneous procedures were clearly defined^{/VCS PD/}.

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 “*Gomes de Mattos 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 2006-05-01 to 2009-04-30 (including both days).

In the course of the verification 13 Corrective Action Requests (CAR) and 3 Clarification Requests (CR) were raised and successfully closed. Furthermore 0 FARs are raised to improve the monitoring system in the future. 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 ,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.
- 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: 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]
2006	32,582	-	-	-	-	-	32,582
2007	43,985	-	-	-	-	-	43,985
2008	52,101						52,101
2009	17,936						17,936
TOTAL:							146,604

Essen, 2009-05-27



Inga Nagel
TÜV NORD JI/CDM CP
Verification Team Leader

Essen, 2009-05-27



Eric Krupp
TÜV NORD JI/CDM CP
Final approval

5 References

Table 5-1: Documents provided by the project proponent

Reference	Document
/BRI/	BRITO E.O. 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. – “Estimative waste production in the brazilian industries”
/DOFs/	Forest Origin Document from the management areas
/FAE/	Financial assessment evidences. Please refer to invoice receipts for the assessment of the pertinent financial data used in the financial spreadsheet calculation.
/ML/	Municipal License to Gomes de Mattos Ceramic – municipal register:140114, issued on 2008-01-14. Valid until 2008-12-31.
/MR/	Gomes de Mattos Ceramic Fuel Switching Project – Version 6 – 2009-05-26
/OL1/	Operational License # 173/2008. Processo SEMACE 2007-016888/TEC/RENLO. # SPU 07436356-5. Issued on 2008-05-26. Valid until 2009-06-26.
/OL2/	Operational License # 173/2008. Processo SEMACE 2007-016888/TEC/RENLO. # SPU 07436356-5. Issued on 2008-05-26. Valid until 2009-06-26.
/PFT/	Contract signed between Carbone Social Serviços Ambientais Ltda. Brasil and Gomes de Matos 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 2008/07/29
/SL/	Sanitary License 026 – valid: 2007-12-31 (City hall license)
/VCS PD/	Project Design Document “Gomes de Matos Ceramic Fuel Switching Project” - Version 05 – May 27th, 2009.
/WEB14/	Website consult on 2009/04/29 Sawdust: http://www.cca.org.nz/pdf/Masses.pdf Residues from cashew trees: LORENZI, H. Árvores Brasileiras: Manual de Identificação e Cultivo

Reference	Document
	de Plantas Arbóreas Nativas do Brasil, vol.1. 4.ed. Nova Odessa, SP: Instituto Plantarum, 2002. Babaçu coconut husk: http://www.ipef.br/publicacoes/scientia/nr34/cap04.pdf Algaroba wood: http://www.cnpf.embrapa.br/publica/boletim/boletarqv/bolet45/pag-99_106.pdf Wood from forest management areas (eucalyptus): http://www.ipef.br/publicacoes/scientia/nr23/cap08.pdf
/WEB15/	Website consult on 2009/04/29 http://www.cnip.org.br/planos_manejo.html
/WL/	Water License was required on 2008-10-07, and will be issued in 30 days.
/XCS1/	Calculation spreadsheet of baseline study and emission reduction Version 04 – May 25th, 2009.
/XCS2/	Gomes de Matos Ceramic Financial Costs – version 04, May 25th 2009.
/XCS3/	Gomes de Mattos Ceramic MR calculation – version 03 – May, 26 th 2009.

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

Reference	Document
	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
/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. Ronaldo Sampaio Gomes de Mattos - ceramic's director. Ms. Flávia Geane Mendonça	- Desk review findings - General aspects of the project - Project design, Commissioning and implementation - Technical equipment and operation of the project - Performance of the project

Interviewed Persons / Entities	Interview topics
– monitoring responsible ceramic. Ms. Flávia Takeuchi – Carbono Social Serviços Ambientais Ltda. Brasil Mr. Cézar Braga Alves - Carbono Social Serviços Ambientais Ltda. Brasil	- 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	Moi ¹		Name	Organization / Function
/IM01/	V	☒ Mr. ☐ Ms..	Ronaldo Sampaio Gomes de Mattos	Gomes Mattos Ceramic's director
/IM01/	V	☐ Mr. ☒ Ms.	Flávia Geane Mendonça	Gomes Mattos Ceramic
/IM01/	V	☐ Mr. ☒ Ms.	Flávia Yumi Takeuchi	Carbono Social Serviços Ambientais Ltda. - Technical Analyst
/IM01/	V	☒ Mr. ☐ Ms	Cézar Braga Alves	Carbono Social Serviços Ambientais Ltda.

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