Assessed by:

65 Millet St. Suite 201
Richmond, VT 05477 USA
Tel: 802-434-5491
Fax: 802-434-3116
www.rainforest-alliance.org

Carbon Forestry Project Audit
Managed by:
Imaflora

Estrada Chico Mendes, 185
Sertaozinho Piracicaba - SP, Brazil
13400970
Tel: +55 19 3429 0800
Fax: +55 19 3429 0800
Contact Person: Talia Bonfante
Email: talia@imaflora.org

Rainforest Alliance
SmartWood Program

Validation Assessment
Report for:

Florestal Santa Maria SA
in
Colniza, MT Brazil

Report Finalized:	4 May 2012
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Field Audit Dates:	31 Oct to 4 Nov 2011
Lead Auditor:	Jared Nunery
Audit Team Member(s):	Thales West, Talia Bonfante
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Project Proponent Contact:	Marcelo Martins Lunardelli
Project Proponent Address:	Rua Augusta 2883 - Sao Paulo

FLORESTAL SANTA MARIA VCS VALID 12

Document Prepared By Rainforest Alliance

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Prepared By	Rainforest Alliance and Imaflora
Contact	65 Millet Street Suite 201, Richmond, VT USA +1 (802) 434-9732 jnunery@ra.org www.rainforestalliance.org
Approved By	Jeffrey Hayward
Work Carried Out By	Jared Nunery (Lead Auditor) Talia Bonfante Thales West

Summary:

The Florestal Santa Maria REDD Project in Coloniza, Mato Grosso, Brazil, aims to avoid deforestation within the 71,714 hectare project area. The validation of the project activities included both an off-site desk review of project documentation as well as a visit to the project area in November of 2011. The validation audit was conducted against the VCS Version 3 in parallel with an initial preassessment of the forest management activities as part of the beginning of the process for FSC certification of the entire project area. The audit consisted of a combination of interviews with project staff and key stakeholders, review of GHG calculations and project documentation, and field inventory of permanent sample plots used in the project biomass inventory. Findings related to the field audit are described in Annex A of this report. All identified nonconformances are described within section 2 of this audit report. Following the issuance of the Draft Validation Report, which included all findings from the field visit, the Project Proponent submitted revised documents and additional evidence to address nonconformances identified during the field audit. Findings from the review of all nonconformances are included within section 2 of this report. Following the review of the revised documents, the audit team found with a reasonable level of assurance that the project is in full conformance with the VCS Version 3.

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1 Introduction

The Rainforest Alliance's SmartWood program was founded in 1989 to certify forestry practices conforming to Forest Stewardship Council (FSC) standards and now focuses on providing a variety of forest auditing services. In addition to being an ANSI ISO 14065:2007 accredited validation and verification body, Rainforest Alliance SmartWood program is also a member of the Climate, Community, and Biodiversity Alliance (CCBA) standards, and an approved verification body with a number of other forest carbon project standards. For a complete list of the services provided by Rainforest Alliance see http://www.rainforest-alliance.org/climate.cfm?id=international_standards.

Dispute resolution: If Rainforest Alliance clients encounter organizations or individuals having concerns or comments about Rainforest Alliance / SmartWood and our services, these parties are strongly encouraged to contact the SmartWood program headquarters directly.

1.1 Objective

The purpose of this report is to document the conformance of Florestal Santa Maria Project with the requirements of the Verified Carbon Standard (VCS). The project was developed by Florestal Santa Maria and Plant Environmental Intelligence, hereafter referred to as "Project Proponent". The report presents the findings of qualified Rainforest Alliance auditors who have evaluated the Project Proponent's systems and performance against the applicable standard(s).

1.2 Scope and Criteria

Scope: The scope of the audit is to assess the conformance of Florestal Santa Maria REDD project in Colniza, MT Brazil against the Verified Carbon Standard. The objectives of this audit included an assessment of the project's conformance with the standard criteria. In addition, the audit assessed the project with respect to the baseline scenarios presented in the project design document. The project covers an area of 71,714 ha. The land is privately owned. The project has a lifetime of 30 years, and estimates it will remove and/or reduce 29,923,331 tCO_2e over the course of the project lifetime.

Standard criteria: Criteria from the following documents were used to assess this project:

- Verified Carbon Standard Program Guide 2011 v3;
- Verified Carbon Standard 2011 v3;
- Verified Carbon Standard Agriculture, Forestry and Other Land Use (AFOLU) Requirements 2011 v3;
- Verified Carbon Standard AFOLU Non-Permanence Risk Tool 2011 v3;
- Verified Carbon Standard Program Updates (please see VCS website for the latest updates); and as applicable,
- The VCS approved methodology/modules used by the project.

Materiality: All GHG sinks, sources and/or reservoirs (SSRs) and GHG emissions equal to or greater than 5% of the total GHG assertion unless otherwise defined by the standard criteria.

1.3 Project Description

The following is taken from section 1.1 of the PD v1.2

"The proponent and developer of the Project is Florestal Santa Maria S/A. PLANT Environmental Intelligence is technically responsible for this VCS-PD, which had contributions of AVIX in deforestation risk analysis and similarity analysis. All legal matters are in responsibility of Pinheiro Neto Advogados' lawyers. General Coordination for this initiative was performed by VO2 Desenvolvimento Empresarial. The electronic addresses of the companies cited above are available in item "1.4 Other Entities Involved in the Project" of this VCS-PD.

The FSM forest estate, a rural property solely dedicated to sustainable management of natural forests, is located in the Municipality of Colniza, some 30 km from the township, in the North western region of the State of Mato Grosso, approx. 1,100 km north from the State Capital of Cuiabá. The geopolitical region is within the Brazilian Legal Amazon. The municipality of Colniza has been fairly recently emancipated, in the year of 1998 and it previously belonged to the municipality of Aripuanã, founded in 1946.

The FSM-REDD Project was conceived to give the opportunity for this forest management company to take full advantage of the REDD regulatory system under development by means of the VCS System. The specific area of the Carbon Project is a section of a larger colonization initiative, initiated in 1975, by means of the legally established state effort to develop the northern region of the State of Mato Grosso."

1.4 Level of assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertion is materially correct and is a fair representation of the GHG data and information.

2 Audit Overview

Based on Project's conformance with audit criteria, the auditor makes the following recommendation:		
Final Report Conclusions		
☒	Validation approved: The project conforms with the audit criteria, and is likely to achieve estimated GHG emission reductions and/or removals. *No NCRs issued*	
☐	Validation not approved: The project has not demonstrated conformance with the audit criteria. *Conformance with NCR(s) required*	
Draft Final Report Conclusions		
☒	Validation approved: *No NCRs issued*	The Project Proponent has 7 days from the date of this report to submit any comments related to the factual accuracy of the report or the correctness of decisions reached. The auditors will not review any new material submitted at this time.
☐	Validation not approved: *Conformance with NCR(s) required*	
Draft Report Conclusions		
☐	Validation approved: *No NCRs issued*	The Project Proponent has 30 days from the date of this report to revise documentation and provide any additional evidence necessary to close the open non-conformances (NCRs). If new material is submitted the auditor will review the material and add updated findings to this report and close NCRs appropriately. If no new material is received before the 30 day deadline, or the new material was insufficient to close all open NCRs the report will be finalised with the NCRs open, and validation and/or verification will not be achieved. If all NCRs are successfully addressed, the report will be finalised and proceed towards issuance of a assessment statement.
☒	Validation not approved: *Conformance with NCR(s) required*	

2.1 Audit Conclusions

Summary of project conformance with VCS Criteria:

Rainforest Alliance Report Criterion	Draft Report Project Conformance	Final Report Project Conformance
1 General Requirements	☒ Yes ☐ No	☒ Yes ☐ No
2 Project Design	☐ Yes ☒ No	☒ Yes ☐ No
3 Application of Methodology	☐ Yes ☒ No	☒ Yes ☐ No
4 Additionality and baseline selection	☐ Yes ☒ No	☒ Yes ☐ No
5 Quantification of GHG emissions	☐ Yes ☒ No	☒ Yes ☐ No
6 Leakage	☐ Yes ☒ No	☒ Yes ☐ No
7 Net emission reductions and removals	☐ Yes ☒ No	☒ Yes ☐ No
8 Monitoring plan	☐ Yes ☒ No	☒ Yes ☐ No
9 Environmental Impact	☒ Yes ☐ No	☒ Yes ☐ No
10 Comments by stakeholders	☒ Yes ☐ No	☒ Yes ☐ No
11 Non-permanence Risk Assessment	☐ Yes ☒ No	☒ Yes ☐ No

Following the field audit, the audit team prepared the Draft Validation Report, which included findings from the pre-validation desk review as well as those findings from the field audit (see Annex A for complete documentation of findings). Included in this report were 22 identified nonconformances. Following the issuance of the Draft Validation Report, the Project Proponent revised the PDD and many supporting documents (see section 2.4 for complete list of revised documents). All revised documents were submitted to the audit team on 24 February 2012. Following the review of revised documents, the audit team requested additional clarification on 23 March 2012 to address outstanding issues related to NCR 09/12, 10/12 and 14/12. In parallel to this request, the audit team also consulted the VCSA regarding the interpretation of applicability conditions related to the use of VM0007 M-MON v2.0. The VCSA provided clarification regarding the interpretation of the applicability conditions related to the use of this module (see response in NCR 02/12 below). Following the requested clarification from the audit team, the Project Proponent submitted additional clarification on 27 March 2012 and 05 April 2012. The additional clarification was found to be sufficient to address the outstanding issues related to all NCRs. As such, following the submission of additional

clarification from the Project Proponent and the interpretation from the VCSA, the project was found to be in full conformance with the VCS Version 3 standard with a reasonable level of assurance.

2.2 Non-conformance evaluation

Note: A non-conformance is defined in this report as a deficiency, discrepancy or misrepresentation that in all probability materially affects carbon credit claims. Non-conformance Request (NCR) language uses "shall" to suggest its necessity but is not prescriptive in terms of mechanisms to mitigate the NCR. Each NCR is brief and refers to a more detailed finding in the appendices.

NCRs identified in the Draft Report must be closed through submission of additional evidence by the Project Proponents before Rainforest Alliance can submit an unqualified statement of conformance to the GHG program. Findings from additional evidence reviewed after the issuance of the draft report are presented in the NCR tables below.

NCR#:	01/12
Standard & Requirement:	VCS Standard 3.19.1
Report Section:	2.1 VCS Standard Section 3.19.1: Project description
Description of Non-conformance and Related Evidence:	
The project did not fulfil the requirement 3.19.2 of the VCS Standard V3.1 regarding the title and reference of the methodology applied to the project, including the version number. The PD is required to clearly reference the methodology used including version number (note that VM0007 includes multiple version numbers for various modules).	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	PD v1.2 (Doc.#1a)
Findings for Evaluation of Evidence:	In the PD v1.2, sections 2.1 and 2.2 – pg.60-65, the text references the methodology version number (VM0007 v1.1) as well as modules title and version number applied by the proposed project.
NCR Status:	CLOSED
Comments (optional):	Not Applicable

NCR#:	02/12
Standard & Requirement:	VCS Standard Section 3.5
Report Section:	3.1
Description of Non-conformance and Related Evidence:	
The M-MON "Methods for monitoring of greenhouse gas emissions and removals" v.1.0, was used, as stated in Section 4.3, to monitor changes in land cover due to deforestation, forest degradation and carbon stock enhancement. However, following review of the planned project activities which include active forest management activities, the audit team found that version 1.0 of M-MON does not accurately address carbon stock removals/losses from forest management activities. However, during the period in which the audit team was writing the draft report, version 2.0 of M-MON was released by the VCSA. This version of M-MON includes a specific process for the calculation of carbon stock losses from forest management activities which the version 1.0 of M-MON (currently applied by the project) does not include. During the field audit, the audit team concerns with the use of the proposed methodology to accurately account for forest management activities were discussed with the project proponents, and the project proponents argued that the established sampling design will account for loses in carbon stocks. Further, ex ante projections include removals from forest management activities. However, the inventory design currently employed by the project proponent includes a sampling protocol based on the existing road network within the project area (transects all start from existing logging roads). This sampling design is appropriate for measuring forest strata carbon stocks, but it is not appropriate for accurately tracking carbon stock loses from forest management activities. For example, the current	

inventory design will not account for carbon stock loses from the construction of new roads (noting an access road running from west to east in the southern section of the project area is already planned as described to the audit team by the project proponents). As such, it is not clear how the project can accurately account for carbon stock loses from forest management activities using version 1.0 of M-MON. Recognizing this, the audit team has concluded that given the planned forest management activities within the project area, the project must utilize the most current version of M-MON to account for carbon stock loses from planned forest management activities.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	!!REDD_ESTIMATES_16_02_2012.xls FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012
Findings for Evaluation of Evidence:	*Updated use of VM0007 M-MON v2.0:* In response to this NCR, the Project Proponent has revised documentation and calculations to conform with M-MON v2.0 in order to adequately account for emissions from planned forest management activities in the project scenario. It should be noted that prior to finalizing the audit report, the audit team consulted the VCSA for guidance on the interpretation of evaluating conformance with the second applicability condition of M-MON v2.0: *If emissions from logging are not omitted as de minimis, logging may only take place within forest management areas that possess and maintain a Forest Stewardship Council (FSC) certificate for the years when the selective logging occurs.* At the time of the project validation, the project had not achieved FSC certification (although the project has begun this process, which included a pre-assessment field visit that was conducted in parallel with the VCS validation field visit). The field audit confirmed that harvesting was currently occurring within the project area at the time of the field visit. The VCSA provided clarification that the intent of this applicability condition was to ensure that FSC harvesting practices were in place to ensure adequate harvest records were retained. The VCSA confirmed that evidence of conformance with this applicability condition can be provided at the time of the first verification, and as such the project is not required to demonstrate conformance with this applicability condition at the time of validation. As such, the audit team confirms that given the project has initiated the process of achieving FSC certification, the use of VM0007 M-MON v2.0 is appropriate. *However, it should be noted that those forest management areas undergoing harvest prior to obtaining FSC certification would not be eligible for GHG emission reduction quantification by applying M-MON v2.0.* Finally, it should be noted that section 2.2 of the revised PD does not include M-MON, however, as the application of M-MON is thoroughly described within section 4 of the PD, this was not identified as a nonconformance. *Application of VM0007 M-MON v2.0:* In the revised main EXCEL spreadsheet (!!REDD_ESTIMATES_16_02_2012.xls), PA LOGGING GAP and PA LOGGING INFRA were created to meet M-MON v.2 requirements. LOGGING GAP refers to emissions inside the Project Area that occur from logging and damage of vegetation near logged trees. LOGGING INFRA refers to emissions inside the Project Area due to creation of roads, skid trails and logging decks. The requirements related to M-MON v.2 were also integrated to the ex-ante emission estimates presented in the VCS-PD. The equations and default values were reviewed by the audit team and are in conformance with the M-MON v.2. The results are acceptable for the validation process, as an ex ante estimation, nevertheless, for the verifications, it is important that the data used come from official logging

	reports that could be verified in its correspondent strata in the field, being considered conservator (i.e. W_{SKID}, L_{SKID}, area of decks, etc...).
NCR Status:	CLOSED
Comments (optional):	It is important to highlight that the issues raised regarding the FSC certification related to the M-MON v2.0 applicability conditions will need to be addressed prior to project verification.

NCR#:	03/12
Standard & Requirement:	VCS Standard Section 3.5
Report Section:	3.2
Description of Non-conformance and Related Evidence:	
During field audit, the audit team found that a given value used to represent the local population in 2004 was not from a reliable source (see worksheet "LEAKAGE OUTSIDE" of the spreadsheet titled "REDD_ESTIMATES_27_09_2011.xls"). As such the proposed methodology deviation was not found to be appropriate given the non-reliable data source applied.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012 LEAKAGE OUTSIDE !!REDD_ESTIMATES_16_02_2012.xls POP2004-TCU POP-2005-DOU POP2006-TCU POP2008_DOU UF_Municipio_2009
Findings for Evaluation of Evidence:	In the revised worksheet "LEAKAGE OUTSIDE" of the submitted spreadsheet titled "!!REDD_ESTIMATES_16_02_2012.xls", information for the population of Colniza was updated with official IBGE data. The official IBGE spreadsheets are available on the internet and were provided to the audit team by the project proponent (NCR 3 Folder). Population data of 2007 and 2010 correspond to official national census performed by the IBGE, while other years (2005, 2006, 2008 and 2009) are official estimates from IBGE. Updated values used to represent the local population were found to be from a reliable and official national source. As such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	04/12
Standard & Requirement:	VM0007 BL-UP
Report Section:	3.4
Description of Non-conformance and Related Evidence:	
During field audit, the audit team reviewed some police reports regarding land invasions, located some fire points nearby the project area by airplane and assessed the land use activities nearby the project area. Settlements and small farms located around the project area represents the major deforestation pressure, based on the conversion from forests to coffee plantation or grazing activities, as livelihood activities for the local population. Nevertheless, as stated in the footnote 2 of BL-UP, project proponent shall justify the definition of small-scale/large-scale deforestation drivers	

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012
Findings for Evaluation of Evidence:	In the Section 2.2 the revised submitted PD v.1.2, the official definition of small property, from the Brazilian Forest Code, was added. The following text was also added: "Settlements and small farms located around the Project Area represent the major deforestation pressure, based on the conversion from forests to coffee plantation or grazing activities, as livelihood activities for the local population. The Brazilian Forest Code defines "small rural property" or "family-scale land tenure" as a land not larger than 150 hectares in the State of Mato Grosso. According to Censo Agropecuário 2006 (IBGE, 2007), the municipality of Colniza has 2,707 individual landowners, which hold 382,499 hectares of lands: this corresponds to an average of 141.3 hectares per landowner. This indicates a great concentration of small scale landowners (holding less than 150 hectares of land). Moreover, it is assumed that a great amount of family-scale land grabbers are not accounted by the IBGE, and that these land grabbers are not individually holding more than 150 hectares for deforestation and installation of the BAU activities." The justification of small-scale/large-scale deforestation drivers was based on official national definitions and were considered appropriate by the audit team. As such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	05/12
Standard & Requirement:	VCS Standard Section 3.15
Report Section:	4.1
Description of Non-conformance and Related Evidence:	
No sensitivity analysis regarding the results from Sub-step 2b of T-ADD was conducted. This is a required step with T-ADD, as required by Sub-step 2d. As such the project has not fully demonstrated conformance with all steps of T-ADD.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012 SENSITIVITY ANALYSIS_en RESUMO ANALISE DE SENSIBILIDADE AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ +10% AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ - 10% AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO + 10% AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO - 10% AVALIACAO_DA_MADEIRA__MAIS_REDD-PLANILHA BASICA
Findings for Evaluation of Evidence:	A sensitivity analysis was presented on the submitted PD v.1.2, as required by T-ADD, Sub-step 2d. The worksheets related to the sensitivity analysis were submitted to the audit team (NCR 5 Folder). A sensitivity analysis of potential IRRs, as a function of different scenarios of exchange rates and VCU prices is available in the PD v.1.2 (Section 2.5 and Table 5). For financial simulation

	of these scenarios, exchange rates and VCU prices were tested with values 10% higher or 10% lower than those used in “Scenario 1 + REDD”. According to the scenarios used in this sensitivity analysis, it is concluded that the IRR could vary between 8.94% and 9.81%, depending on values applied. It is also concluded that variations in exchange rates and VCU prices have similar impacts on the overall IRR estimate. The audit team found that the financial attractiveness of the project scenario is robust to reasonable variations in the critical assumptions and it is unlikely to be the financially most attractive one, as such the project is found to be in conformance with the additionality tool and this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	06/12
Standard & Requirement:	VCS Standard Section 3.15
Report Section:	4.1
Description of Non-conformance and Related Evidence:	
The assignment and release of buffer credits at subsequent verification events was not estimated properly. During the field audit the planned release of buffer credits was reviewed by the audit team (as included within financial projections). The planned release was found to be calculated incorrectly, and following the field audit, the audit team clarified that the re-distribution of 15% of the total credits in the buffer pool are returned to the project at each verification. This is explained in the VCS registration documents available on the VCS website. As the amount of returned credits is included within financial projections and impacts the project cash flow calculations and IRR analysis, this error was identified as a nonconformance.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012 !!REDD_ESTIMATES_16_02_2012.xls
Findings for Evaluation of Evidence:	The cash-flow applied in the financial additionality analysis was updated considering 15% of refund of buffer credits (see Section 4.2 of the PD v.1.2 and the revised worksheet "VCU" of the submitted spreadsheet titled "!!REDD_ESTIMATES_16_02_2012.xls"). The results of the additionality analysis were updated in the PD v.1.2 as a function of changes in buffer refunding (NCR 5 Folder). The calculation of total VCUs was also updated to be in conformance with the buffer credit refund dynamics throughout the project period (Section 4.2 of the PD). The updated assignment and release of buffer credits at subsequent verification events was estimated properly in accordance with VCS requirements as well as the impact of the returned credits included within: financial projections, project cash flow calculations, and IRR analysis. As such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	07/12
Standard & Requirement:	VCS AFOLU Requirements Section 4.5 and VM0007 BL-UP
Report Section:	4.2
Description of Non-conformance and Related Evidence:	
The audit team confirmed that, during the development of the deforestation risk map, Step 3.3 of BL-UP module, regarding model calibration and confirmation, was not followed. Further, the information regarding the map with the location of future deforestation was not prepared for the project area (BL-UP, Step 3.4). Step 3.3 of BL_UP requires model calibration and confirmation of the risk maps, and the results of this calibration and confirmation are then used to select the most appropriate	

map. As this has not been completed, it is not clear whether or not the most appropriate risk map has been selected, and the actual map used to project likely deforested areas cannot be evaluated by the audit team. According to the company responsible for the imagery interpretation of the project area, the imagery used for the analysis presented with 0% cloud cover, 30 m² resolution, and pixel classification with 99% accuracy. Project proponents are supposed to provide the audit team with the classification methodology used, however no additional evidence was provided at the time of the issuance of the Draft Validation Report. Accuracy reports must be presented in order to prove that the imagery used is in accordance with BL-UP section 2.1.4. Prior to validation the project proponent must demonstrate full conformance with the methodological requirements for the historic deforestation rate and risk calculation.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012 DEFORESTATION RISK ANALYSIS_PAGE 7 FIGURE OF MERIT_FOM_MAPS QA_QC_IMAGERY SENSITIVITY DEFORESTATION RISK MODEL SENSITIVITY DEFORESTATION RISK MODEL SIMULATION MODEL MAPS
Findings for Evaluation of Evidence:	Within the PD, section 3.1 described the completion of the location analysis as elected by the project proponent per step 3.0.b of BL-UP where projects with “Transition Configuration” can elect to conduct a location analysis. Following the requirements of BL-UP the project has completed a validation of the final deforestation model selected. The validation was conducted on the Reference Area, and three different models were evaluated (as evidence in the document FIGURE OF MERIT_FOM_MAPS). The model with the highest Figure of Merit rating was selected, and the FOM was equal to 0.61, which is above the threshold for Transition Configuration. Further a sensitivity analysis was conducted to evaluate the relative importance of parameters used in the deforestation model. The deforestation model parameter sensitivity analysis was evaluated by the audit team during the field audit and found to be appropriate. Further, Figure 17 has been added to the revised PD to clearly describe the deforestation model selection process (including the evaluation of FOM). Step 3.4.2 of BL-UP is required of all projects completed a location analysis. This step requires the Project Proponent to project future location of deforestation. In section 3.1 of the revised PD on p. 92 it states: *“Future deforestation is assumed to happen first at the pixel locations with the highest deforestation risk value. In the Deforestation Risk Map, the pixels with the highest risk value were successively selected whose area is equal to the area expected to be deforested in a given project year, proportionally for a given stratum occurring in the Project Area. Pixel selection procedure was repeated for each successive project year. All yearly baseline deforestation areas were compiled in one single table showing the expected Baseline Deforestation for the Project Duration (Table 7; Location Analysis). This procedure was repeated for each forest stratum occurring in the Project Area.”* The deforestation location analysis includes a risk calculation which is used to project future deforestation based on the risk rating in the identified risk map. Deforestation is then projected based on the risk map for each stratum, and then summed annually to calculate total annual deforested hectares (see Table 7 within the PD). As such the project has demonstrated conformance with the methodological requirements for the projection of deforestation within the

	baseline scenario.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	08/12
Standard & Requirement:	VCS Standard Section 3.16
Report Section:	5.1
Description of Non-conformance and Related Evidence:	
Section 2.3 of the PD describes the SSRs included within GHG calculations. Following the guidance of VM0007, the project calculates GHG emissions associated with aboveground and belowground biomass, and harvested wood products. The project does not include carbon stocks in dead wood pools, nor does the PD include a justification as to why this pool is excluded. Audit team field visit to the reference region for deforestation calculations confirmed that in the deforested baseline scenario this carbon pool is likely to be much less than the project scenario. However, VM0007 states in the Guidance Manual for VM0007 p.10 that the tool T-SIG shall be used to justify the omission of carbon pools and emission sources. No evidence of the use of this tool for the calculation of the significance of dead wood carbon pools was provided to the audit team during the audit. As such, the Project Proponent has not provided clear evidence to justify the exclusion of carbon stocks in the dead wood pool.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012
Findings for Evaluation of Evidence:	The Project Proponent has revised section 2.3 of the PD to include a specific section explaining why the dad wood pool was excluded from GHG calculations. The following has been added to the revised PD on pg.70: *"The omission of the dead wood carbon pool was determined for a matter of conservativeness, given that in the deforested baseline scenario this carbon pool is likely to be much less than the project scenario. Even if the dead wood carbon pool is significantly lower in the baseline than in the project scenario, the project proponent opted not to include this carbon pool in accounting of VCU benefits, according to "REDD Methodology Framework" (REDD-MF) Version 1.1 statement: "Mandatory if this carbon pool is greater in baseline (post-deforestation/degradation) than project scenario and significant; otherwise can be conservatively omitted.""* Specifically the justification notes that the use of T-SIG is not required if the carbon pool is less in the baseline scenario than the project scenario (see REDD-MV v1.1 p.4). The justification provided within the revised PD was supported by the evidence collected by the audit team in the field through visiting adjacent land to the project area that had been deforested. As such this justification was found to be sufficient to demonstrate conformance with VM0007 for the exclusion of carbon storage in the dead wood pool and this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not Applicable

NCR#:	09/12
Standard & Requirement:	VCS Standard Principle of Transparency and VM0007 BL-UP
Report Section:	5.2
Description of Non-conformance and Related Evidence:	

Carbon stocks calculated from the field inventory apply the Francon Factor, a volumetric equation sourced from the Brazilian government. During the field audit the audit team discussed the appropriateness of the Francon Factor as an allometric equation, and it was decided that the equation could be used as an allometric equation given that all requirements related to the use of allometric equations within the methodology were met. Interviews with PLANT staff confirmed that the Francon Equation had not been validated as required by CP-AB (see p.12-13). As no validation of the Francon Equation specific to the project area has been conducted, it is not clear how this equation qualifies as an appropriate allometric equation.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012 dados_transectos_01_101020_rev dados_transectos_02_101020_rev dados_transectos_03_101020_rev dados_transectos_04_101020_rev dados_transectos_05_101020_rev dados_transectos_06_101020_rev dados_transectos_07_101020_rev dados_transectos_08_101020_rev dados_transectos_09_101020_rev dados_transectos_01_101020_rev dados_transectos_10_101020_rev dados_transectos_11_101020_rev dados_transectos_12_101020_rev dados_transectos_13_101020_rev dados_transectos_14_101020_rev dados_transectos_15_101020_rev dados_transectos_16_101020_rev dados_transectos_17_101020_rev dados_transectos_18_101020_rev
Findings for Evaluation of Evidence:	In the revised documents submitted for review, the project no longer employs the Francon Factor. Rather the project now uses the following equations: • For trees 5 to 81.99 cm DAP: Nogueira et al. 2008 (specific to South Amazon) • For trees ≥ 82 cm DAP: Colpini et al. 2009 (specific to Mato Grosso, BR) • For palm tress: Saldarriaga et al. 1988 (specific to Colombia/Venezuela) The use of these equations is justified on p.97 to 102 of the revised PD. On p.99 of the revised PD it states that the Nogueira et al. equation was “adjusted” for estimating bole volume of trees. Review of the equation found the correct use of the equation as defined within the published document. Further, the audit team sought clarification from the project developer to confirm that the Nogueira et al. equation was not altered for use in applications. In a subsequent communication provided by the project developer on 27 March 2012, it was confirmed that Nogueira et al. equation was used in full. VM0007 CP-AB states requires the validation of the applicability of equation used. Specifically VM0007 CP-AB states the following on p.12: “*It is acceptable practice to use equations developed for regional or pantropical forest types, provided that their accuracy has been validated with direct site-specific data (per guidance below).”*

	As a substitute for site-specific data for equation validation, the project proponent has submitted a justification of the similarity of the forest type with which the equations were developed in relation to the Project Area. Given that both equations were developed in the same region, forest type, climate, and in areas with similar physiographic conditions as the project area, it was determined that site specific validation was not required. The audit team reviewed a sample of the following revised inventory plot calculation spreadsheets for the correct application of the equations: • dados_transectos_02_101020_rev • dados_transectos_03_101020_rev • dados_transectos_12_101020_rev • dados_transectos_14_101020_rev • dados_transectos_17_101020_rev Review of data spreadsheets confirmed the correct application of the Colpini et al. 2009 equation used for palms as well as the Nogueira et al. 2008 equation used for trees with 5 to 81.99 cm DAP. The use of the Nogueira et al. equations uses the values defined in Table 3 of the publication. Review of this table confirmed the correct application of the equation and defined values within the study. According to the revised PD, the Kopezky – Gerhardt model was applied to trees ≥ 82 cm within the project area. This model is stated as follows in Colpini et al.: **Tabela 3** - Modelos testados para estimar o volume total de árvores individuais do povoamento*. Modelo | Autor | Modelo 1 | Kopezky – Gehrhardt | $v = \beta_0 + \beta_1 d^2 + \varepsilon_i$ Review of the data spreadsheets confirmed the correct use of parameters β_0 and β_1 however the parameter ε_i is not included within column L of the spreadsheets where volume is calculated. Additional clarification provided by the project developer explained that the use of the error parameter was not required due to the fact that the model regression coefficient (r^2) exceeded the methodology requirements. As such the project has fully addressed this nonconformance.
NCR Status:	CLOSED
Comments (optional):	It should be noted that with the revised GHG calculations based on the use of the three allometric equations, the ex ante predictions of GHG emission reductions predict the project will cross the "mega project" threshold of >1,000,000 $mtCO_2e$ during year 25 of the project crediting period. This will result in a change in the required materiality threshold if the ex ante emission reductions are realized ex post.

NCR#:	10/12
Standard & Requirement:	VCS Standard Principle for Accuracy
Report Section:	5.3 and Section 8.1
Description of Non-conformance and Related Evidence:	
During the field audit, field inventory sampling used as the initial input to derive project area and RRD carbon stocks, were evaluated by the audit team. In total, 5 sub-plots were re-measured by the audit team. Re-measurement of the sub-plots identified numerous issues that ultimately impact the accuracy associated with the carbon stock estimates used to calculate project GHG emissions. For example, witness audit of the inventory crew measurement confirmed the failure to follow field inventory SOPs. Interviews with inventory crew members confirmed that height was not measured using a clinometer as noted in the SOPs. Rather height	

was estimate using ocular estimates from the base of the tree looking directly up the stem. During the field audit, the audit team use a laser range finder to compare ocular estimates with to measured heights. In total 30 trees were measured and independent height estimates from field crew members were recorded for each of the 30 trees. Variation between inventory crew members was noted, however when averaged, a significant difference between the averaged ocular estimate and the audit team height measurements was not found when compared using a Paired t-Test for Two Sample Means (note data was not randomly distributed). This finding showed that the 3 field crew members had strong estimations of height in the field, however, when field re-inventory of sub-plots was compared to original inventory plot data collected to derive strata carbon stock estimates, significant differences between the height measurements, measured circumferences, and actual number of trees measured within the plots was noted. As such, the failure to follow inventory SOPs has resulted in systematic issues that have ultimately resulted in material errors in the inventory estimates. Further, the project proponent did not provide the audit team with an estimate of uncertainty in field measurements, but rather argued that conservative approaches were used and as such uncertainty did not need to be calculated. However, comparison of re-inventory of sub-plots during the field audit revealed substantial differences between the original field inventory and the audit team re-inventory. As such it is not clear how the carbon stock estimates for the project area can be considered accurate. Field inventory errors combined with data transfer errors from field books to spreadsheets (see findings below regarding errors in field inventory transcription errors), make it impossible for the audit team to validate the current FSM inventory. Prior to validation, FSM must provide additional evidence to demonstrate field inventory accuracy, and address nonconformances with the implementation of field inventory SOPs (noting that ocular estimates of tree heights are not found to be an appropriate measurement technique for forest carbon inventories).	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	SOP_inventario_REDD_23_02_2012_V2.doc CONCLUSION_TEST_N.xls TESTE_N.xls FSM_REDD_VCS_PD_V1.2_24_02_2012 ANSWER REPORT_24_02_2012
Findings for Evaluation of Evidence:	As evidence of inventory conformance with VM0007 X-UNC requirements for meeting +/- 15% of $C_{REDD,t}$ at the 95%CI, the project proponent has provided a summary of the calculated uncertainty for each sub-stratum. Uncertainty calculations for each sub-stratum are presented in the file titled “TESTE_N” in the worksheet titled “Parcelas Final”, and summarized in the file titled “CONCLUSION_TEST_N”. The audit team reviewed these worksheets and confirmed that the calculated inventory errors for each sub-stratum met the X-UNC requirements in that the calculated inventory uncertainty for each strata was less than 15%. Additionally, the project proponent has revised SOPs to ensure that future inventories are conducted accurately. Within the SOPs, the text describes how errors identified in relation to the field data transcription were rectified. This was further clarified by a response provided by the project developer on 27 March 2012. In this response the project developer explained the process used to evaluate field inventory data transcription, identify errors, and account for errors in biomass calculations. The approach employed by the project developer was found to be adequate to address the issues identified during the field audit. As such this nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	See response to NCR 14/12 below for further findings on this issue.

NCR#:	11/12
Standard & Requirement:	VM0007 BL-UP

Report Section:	5.3
Description of Non-conformance and Related Evidence:	
The project uses BL-UP version 1.0 of VM0007 to calculate the historic deforestation rate. In September of 2011, version 2.0 of BL-UP was released, however, as the project does not utilize the population driver approach to BL-UP, the use of Version 1 is appropriate. Section 3 below includes findings relevant to the application of BL-UP, however the following findings are specific to the calculations resulting from the application of BL-UP. Following BL-UP the project employs the simple historic estimation of annual areas of unplanned deforestation over the historical reference period from 1999 to 2009. The following Landsat imagery (30m resolution) was used in calculations: 1999, 2001, 2004, 2007, and 2010. It should be noted that section 2.1.1 of BL-UP allows for the use of 30m medium resolution Landsat imagery, however for the first point in time must use high-resolution data (5m resolution) and/or include direct field observation for groundtruthing the medium resolution data. The project did not include high resolution imagery. The project did utilize a field inventory; however this field inventory did not include specific groundtruthing of spectral imagery classification of land use classes used in deforestation calculations. Further, the inventory was restricted to the project area, and did not include any areas designated as coffee production, cleared land, grazing areas, as such it is not clear how the forest inventory would qualify as a groundtruthing exercise to justify the use of medium resolution data in conformance with the data requirements of BL-UP. As such, the project is not found to be in conformance with the methodological requirements for the use of high resolution imagery in the first (most recent) data point.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 QA_QC_IMAGERY
Findings for Evaluation of Evidence:	To address this nonconformance, the project developer provided an explanation of the map accuracy assessment conducted by GEOMAPAS. Additionally, the QA/QC report from the deforestation risk assessment was provided. In justification of the accuracy of the remote sensing analysis, the project proponent states that forest classification employed a geo-referencing analysis based on geodesic assessments for Law 10.267 of INCRA. The use of geo-referencing conforms with the VM0007 BL-UP requirements for the first point in time, as the methodology requires the use of high-resolution data (e.g. <5 x 5 m pixels) *and/or direct field observations for groundtruthing* the medium resolution data. As such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	12/12
Standard & Requirement:	VCS Standard Principle of Transparency
Report Section:	5.7
Description of Non-conformance and Related Evidence:	
Multiple assumptions related to GHG calculations are not transparently described. Some assumptions are noted in the GHG calculation spreadsheet, however many assumptions were not noted. Below are examples of assumptions that are not clearly and transparently explained within the PD. • When evaluating the Leakage Belt deforestation factors and general forest characteristics (stratification, forest type, carbon stocks), the same parameters used for the project area are assumed to be equal in the leakage belt. • Deforestation within the project area is distributed across strata proportional to strata size, as such location within the project area is not considered when projecting planned forest management within the project scenario. • The same harvest volumes are assumed for all strata, hence wood product calculation across strata varies only as a function of strata size and merchantable volume. • In the leakage calculation of $PROP_{RES}$ is assumed that all non- $PROP_{RES}$ is residential. Whenever assumptions are used, the PD and/or supporting documents that are publically available must clearly explain assumptions used, in order to provide full transparency in accordance with VCS principles.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the

	requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	The PD has been revised to clearly and transparently explain assumptions related to GHG calculations. In addition to clarifying the assumptions described above, additional assumption related to the implementation of VM0007 M-MON v2 are clarified in the monitoring section of the PD as well as in the calculation of emissions arising through logging infrastructure in section 3.2 of the PD. The revisions to the PD were found to be sufficient to address this nonconformance, and as such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	13/12
Standard & Requirement:	VCS AFOLU Requirements Section 4.6.15 and 4.6.16
Report Section:	6.5
Description of Non-conformance and Related Evidence:	
VCS AFOLU Requirements for AUDD are described in 4.6.15.2. This requirement states: *"AUDD: The potential for leakage shall be identified and the project shall address (and describe in the project description) the socio-economic factors that drive deforestation and/or degradation. Leakage shall be calculated by monitoring forested areas surrounding the project and other forested areas within the country susceptible to leakage from project activities."* Section 3.3 does not include a description of the socio-economic factors that drive deforestation and/or degradation as required by the VCS AFOLU Requirements. As such the project has not demonstrated full conformance with the VCS requirements for AUDD projects.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	The revised PD now includes the following text in section 3.3 of the PD: "*The implementation of these BAU activities is usually financed by means of initial capital obtained in wood logging. Similarly to the Reference Area and Project Area, the Leakage Belt is also subject to serious risks of land-grabbing promoted by illegal organizations (i.e. family-scale land-grabber associations, land-property documentation forgers), mostly supported by unscrupulous sawmills and political interests. As seen in "STEP 2. Investment analysis to determine that the proposed project activity is not the most economically or financially attractive of the identified land use scenarios" of this VCS-PD, the maintenance of native forest is far of being the most attractive economic scenario, giving the opportunity for land use shifting from native forest to pasture and coffee crops. In this context, the local communities have a widespread culture of deforestation, mainly led by economic factors."* The revised PD now includes a highly qualitative description of the socio-economic factors that drive deforestation, identifying financial incentives for more financially favourable land use practices (as supported through the demonstrated additionality argument) as the primary

	economic driver of deforestation within the region. The audit team field visit to the project area confirmed that the primary drivers of deforestation within the reference region are conversion to agricultural activities. As such, the addition of text to provide a general description of socio-economic factors driving deforestation was found to be sufficient to close this nonconformance.
NCR Status:	CLOSED
Comments (optional):	Not Applicable

NCR#:	14/12
Standard & Requirement:	VM0007 VMD0017 X-UNC
Report Section:	7.2

Description of Non-conformance and Related Evidence:

The PDD continually argues that the most conservative approach was always used in all aspects of project design and development, and as such uncertainty deductions are not required. The project refers to VMD0017 X-UNC which states:

"Where an uncertainty value is not known or cannot be simply calculated, then a project must justify that it is using an indisputably conservative number and an uncertainty of 0% may be used for this component."

The module goes on to state:

"*Alternatively, (indisputably) conservative estimates can also be used instead of uncertainties, provided that they are based on verifiable literature sources or expert judgment. In this case the uncertainty is assumed to be zero. However, this module provides a procedure to combine uncertainty information and conservative estimates resulting in an overall ex-post project uncertainty."*

Within GHG calculations, the project strives to use conservative estimates, however the audit team does not feel uncertainty within the carbon stock inventories is appropriately addressed. Specifically, re-measurement of forest inventory plots found substantial differences between original forest inventory measurement and re-measurement. Audit team witness of forest inventory techniques conducted by field crews confirmed that inventory SOPs were not followed (e.g. see height measurement and DBH measurement techniques discussed in **NCR 10/12**). Further, the audit team conducted a sample of the data transcription between original field measurements and the field inventory spreadsheets used in biomass calculations. The following sub-plots were reviewed:

- T5 P41 SB5: of 92 trees reviewed 4 errors were identified
- T5 P50 SB4: of 117 trees reviewed 4 errors were identified

Further a sample of data transcription from original field inventory sheets revealed that inventory plots were inconsistently labelled, making it impossible to identify which inventory plots individual tree records were sourced from. For example, see T5 P50 SB4. Within the transect spreadsheet for SB4 (electronic record) the trees plot IDs do not consistently match the tee plot IDs within the original field data sheets (some trees listed as SB5 some listed as SB4). During the field audit this issue was discussed with PLANT staff and it was clear that no formal quality assurance check was completed and documented during the data transcription. As such it is not possible to know the magnitude of data transcription errors present within the field inventory. When combined with the identified errors in field measurements identified in section 5.3 and 8.1 of this report, it is not clear how the project can demonstrate that the field inventory has meet the following applicability requirement of X-UNC:

"Guidance on uncertainty – a precision target of a 95% confidence interval equal to or less than 15% of the recorded value shall be targeted. This is especially important in terms of project planning for measurement of carbon stocks; sufficient measurement plots should be included to achieve this precision level across the measured stocks."

Given these findings from the field audit, it is not clear how uncertainty is conservatively assumed to be equal to zero within the project GHG calculations.

Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.

Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012 CONCLUSION_TEST_N.xls (in NCR 10 folder) SOP_inventario_REDD_23_02_2012_V1.doc (in NCR 10 folder) SOP_inventario_REDD_23_02_2012_V2.doc dados_transectos_01_101020_rev dados_transectos_02_101020_rev dados_transectos_03_101122_rev dados_transectos_04_101118_rev dados_transectos_05_101124_rev dados_transectos_06_101117_rev dados_transectos_07_101119_rev dados_transectos_08_101119_rev dados_transectos_09_101026_rev dados_transectos_10_101111_rev dados_transectos_11_101109_rev dados_transectos_12_101124_rev dados_transectos_13_101104_rev dados_transectos_14_101029_rev dados_transectos_15_101027_rev dados_transectos_16_101021_rev dados_transectos_17_101026_rev dados_transectos_18_101022_rev
Findings for Evaluation of Evidence:	As described in the response to NCR 10/12 above, the project developer has completed a full review of all inventory plot files and identified data transcription errors. This process was further explained to the audit team in a clarifying email on 27 March 12 where the project developer stated: *The QA/QC procedures applied on the forest inventory database involved two main steps (these steps are described in the SOP in Portuguese, and are translated below):* *1) QA/QC procedures for data transcription from field datasheets to Excel files (These procedures have detected and corrected typing errors from field datasheets to EXCEL software.):* *- Errors were evaluated for 100% of data-lines from the biomass field inventory. All data-lines were analyzed, comparing data obtained in the field (manuscript field sheets) with data typed in EXCEL worksheets.* *- The detected errors were directly identified in the EXCEL worksheets, by inserting comments, and the lines containing errors were highlighted in yellow.* *- The errors were calculated for each line, consisting of the difference (deviation) between the volume calculated originally and the volume obtained with the corrected data.* *- Errors were classified as follows: i) Not typed: data that were in the manuscript field sheets, but were not typed in the EXCEL file; ii) Repeated: data typed more than once; iii) Does not exist: data typed in the EXCEL worksheet that could not be found in original manuscript field sheets; iv) Typing errors: data typed with errors in CBH or Height.* *- The results of transcription errors were reported by error type, and expressed by the sum of errors for each transect. The column "BALANÇO GERAL" ("Overall Balance") indicates the sum of data errors for each transect. This error was also expressed as a percent of the total volume inside transects (line "% de erro"; "% of error").* *At the end of the "Anexo VIII: Primeiro relatório de QA/QC da digitação dos dados" (Annex VIII in SOP 1), the errors are summarized and the respective corrective actions are described in Portuguese.*

	The audit team reviewed the revised inventory records and confirmed the process described above had been implemented. Further, the project developer defined the process for identifying outliers resulting from inventory transcription errors based on defined parameters to systematically identify outliers (such as recorded trees below inventory thresholds for CBH, or unrealistically tall trees). Further, as explained in findings related to NCR 10/12 above, the Project Proponent submitted additional evidence where the error associated with each strata biomass inventory was quantified and demonstrated to be below the required thresholds of acceptable inventory error within the methodology. The process conducted by the project developer to evaluate inventory data quality was found to be sufficient to demonstrate the defined uncertainty error associated with the field inventory (see also NCR 10/12) was correct with a reasonable level of assurance. As such this nonconformance is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	15/12
Standard & Requirement:	VCS Standard Section 3.17.2 and VCS AFOLU Requirements Section 4.8.1
Report Section:	8.1
Description of Non-conformance and Related Evidence:	
The monitoring plan describes the organizational structure, responsibilities and competencies and methods for generating, recording, aggregating, collating and reporting data on monitored parameters, however the SOPs and QA/QC procedures for the forest inventory were not detailed in monitoring plan. During the field audit, while the audit team was re-inventorying the plots, project proponents assured that QA/QC procedures were taken regarding data collection and management, these procedures shall be presented in the monitoring plan. Further, some of the hardcopy data reviewed by the audit team presented some irregularities that could be explained by the project proponents. QA/QC procedures for data management shall be efficient enough in order to avoid such irregularities. Prior to validation, the project must demonstrate that inventory SOPs and QA/QC procedures have been established and implemented.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	dados_transectos_01_101020_rev dados_transectos_02_101020_rev dados_transectos_03_101122_rev dados_transectos_04_101118_rev dados_transectos_05_101124_rev dados_transectos_06_101117_rev dados_transectos_07_101119_rev dados_transectos_08_101119_rev dados_transectos_09_101026_rev dados_transectos_10_101111_rev dados_transectos_11_101109_rev dados_transectos_12_101124_rev dados_transectos_13_101104_rev dados_transectos_14_101029_rev dados_transectos_15_101027_rev dados_transectos_16_101021_rev dados_transectos_17_101026_rev dados_transectos_18_101022_rev CONCLUSION_TEST_N SOP_inventario_REDD_23_02_2012_V1

	SOP_inventario_REDD_23_02_2012_V2 ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	PD v.1.2 presents the forest inventory SOP, containing QA/QC procedures for the forest inventory, mentioned and summarized in monitoring plan. As a proof of accuracy and QA/QC of the field inventory, the following actions were performed: (1) estimation of field inventory sampling errors for each stratum (CONCLUSION_TEST_N.xls); (2) correction of transfer errors observed in field inventory worksheets (Annex VIII of the document "SOP_inventario_REDD_23_02_2012_V1.doc"), the corrected databank of the field inventory was submitted to the audit team (CORRECTED DATABANK sub-folder); (3) update of field inventory SOP (SOP_inventario_REDD_23_02_2012_V2.doc). All the evidence files provided to the audit team are located in the NCR 15 Folder. The project proponent have corrected field inventory errors and proposed actions for optimizing procedures in future field inventories through SOPs and QA/QC procedures. These procedures were summarized throughout the PD v.1.2. As such the identified issues related to the lack of consistent and appropriate QA/QC procedures and SOPs have been addressed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	16/12
Standard & Requirement:	VCS Standard Section 3.17.1
Report Section:	8.4
Description of Non-conformance and Related Evidence:	
Section 4.2 of the PD v.1.1 describes the data and parameters that will be monitored. However, as noted in section 4.1, due to the planned forest management activities in the project scenario the use of M-MON v1 is not found to be appropriate. As noted above, the use of M-MON v2.0 is necessary to accurately address carbon stock loses from forest management, as such the monitoring plan must account for additional monitoring requirements of M-MON v2.0.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	Calculation spreadsheets were reassessed regarding the carbon removals due to planned forest management activities in the project scenario. The calculation of emissions related to these activities was accounted in final VCU estimates (see Evidences Provided by Organization from NCR 2). The Monitoring Plan was updated with descriptions of calculations concerning emissions from wood logging activities and creation of skid trails, roads and logging decks inside the farm, in accordance with the methodological module M-MON v2.0 and the VCS rules. As such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	17/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1

Report Section:	11.3
Description of Non-conformance and Related Evidence:	
In multiple risk criteria within the project risk assessment report there is no justification provided when the project assumes criteria are not applicable (criteria are simply left blank in the risk report). The project must provide a justification and evidence as to why individual risk criteria do not apply. Section 1.1.3 of the VCS AFOLU Non-Permanence Risk Tool requires that project proponents clearly document and substantiate the risk analysis covering each risk factor applicable to the project. As evidence demonstrating why factors were not applicable was not provided, the risk report does not provide transparent evidence of conformance. During the field audit the audit team reviewed the risk report in full with the FSM management team, and noted that the risk report must include justification for each risk factor. Examples of this include criteria a – d of the Project Management assessment. All criteria must include a clear justification as to why they are not applicable if the risk deduction is not applied.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	Annex 2 of the revised PD now includes a fully completed VCS risk assessment. Each risk factor is clearly identified as either not applicable or a justification for the slected risk rating is provided. The revised risk assessment included in Annex 2 was found to be sufficient to close this NCR.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	18/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1
Report Section:	11.3
Description of Non-conformance and Related Evidence:	
The Management Team is comprised of multiple organizations. This team comprises a “Steering Committee” which is responsible for all decisions related to project activities. This is defined in a legally binding MOU which was reviewed by the audit team. The Steering Committee team includes members with extensive management experience, including extensive management of a forest management enterprise (as demonstrated in the PD supported by review of management team competency during the field audit). Further, the diverse steering committee includes members with both extensive experience in large management systems (including forestry), as well as experience auditing AFOLU projects (as noted in CV of Bunge staff member). Further the steering committee is supported with technical assistance provided by PLANT and a Brazilian Law Firm, who add additional expertise necessary for the implementation with project activities. However, Bunge Staff are not included in the risk mitigation criteria justification, as such the Non-Permanence Risk Report does not provide sufficient evidence of conformance with risk mitigation criteria. Further, the management team does not include any members with experience developing and implementing a REDD project under the VCS. The mitigation criteria require individuals who have successfully managed projects through validation, verification, and issuance of GHG credits. During the field audit this was discussed with the project proponent and noted that at this time very few individuals qualify for this mitigation criteria as very few REDD projects have been approved under the VCS. Further, the audit team contacted the VCS directly for clarification on this point, and the VCS confirmed that in order to qualify for this risk mitigation criteria, the project must include individuals who fully meet this criteria. As such, the project does not currently qualify for this risk mitigation criteria.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.

Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	Revisions to Annex 2 of the PD have included the removal of risk mitigation related to Project Management Risk Factor “e”. As such the project is now in conformance with this requirement of the VCS risk tool and this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	19/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1
Report Section:	11.3
Description of Non-conformance and Related Evidence:	
The audit risk report describes an adaptive management plan. Interviews with FSM staff confirmed that FSM plans to use adaptive management strategies, however no evidence of a clearly documented adaptive management plan was provided to the audit team, and the description provided by FSM staff was not found to be sufficient evidence that an adaptive management plan is currently in place. In order to demonstrate clear conformance with this criteria the project proponent must clearly demonstrate that a documented adaptive management plan that considers the realm of potential risks and obstacles to the project, as well as a system for adapting and changing to circumstances is in place within the FSM management process.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012 Procedimento FSM P-02 Controle ... a Incendio Final para validaçao do grupo 20_02_2012 Evidencia Registro de Ocorrencia Evidencia Registro de Atividades dos Monitores Florestais Evidencia Controle de LigaçSes e Contatos com o Gernete de Logistica e ou a BASE 01 Evidencia Controle de LigaçSes e Contatos com as BASES de Monitoramento eou os Monitores Florestais
Findings for Evaluation of Evidence:	The Project Proponent has presented a documented Adaptive Management Plan, included forms to be used when implementing the plan. Further, this plan is supported by additional descriptions of the 7 bases located throughout the project area and one base located outside the project area that are used to implement management of the project areas. The Adaptive Management Plan describes the process with which the project management will adapt as needed to address issues that arise throughout the project lifetime. The additional documentation submitted to the audit team for review was found to be sufficient evidence to support the mitigation risk rating for the project Adaptive Management Plan. As such this NCR is closed. Subsequent verifications should confirm the implementation of the proposed Adaptive Management Plan.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	20/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1
Report Section:	11.3

Description of Non-conformance and Related Evidence:	
The project proponent argues that the project is protected by a legally binding commitment to continue management practices that protect carbon stocks. The project sites the document AV-03-73958 which refers to the project proponent obligation to maintain forest management practices within the project area. This agreement does not have a specific timeline of 100 years, and review of the agreement by the audit team found that it was not sufficient to demonstrate that the agreement could not be broken within the 100 year time period required for the mitigation criteria. As such, the project rating of -8 is not found to be appropriate. The audit team agrees that the project is protected by a legally binding agreement, however the agreement is not found to be sufficient to demonstrate legally binding commitment for a 100 year period.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	Annex 2 of the revised PD has removed the risk mitigation criterion related to Opportunity Costs "i". The revised risk assessment does not select this mitigation criteria, and includes specific text noting: *"Thus, the Project is protected by a legally binding agreement, however the agreement is not found to be sufficient to demonstrate legally binding commitment for a 100 year period."* The additional clarification text in combination with the revision of the mitigation criteria was found to be sufficient to close this NCR.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	21/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1
Report Section:	11.3
Description of Non-conformance and Related Evidence:	
The project presents a detailed financial analysis in the worksheet 'Consolidated CF', out of the spreadsheet 'AVALIACAO_DA_MADEIRA__MAIS_REDD-AUDITORIA_REV1 setape c protecao.xls'. In this worksheet, an IRR comparison of the proposed project against alternative baseline scenarios is presented. It should be noted that the REDD project IRR is 9,85%, however in Table 5 of the PD, it states that adding the revenue from VCUs generated by the REDD project will increase the IRR to 9.88% (note this is slightly different than the IRR listed in the supporting documents). The VCS requires an opportunity cost analysis to be completed covering the crediting period. Further, for the NPV analysis, section 2.2.3.1 of the VCS AFOLU Non-Permanence Risk Tool requires that all relevant assumptions, parameters, and data sources are referenced so that the NPV analysis can be transparently evaluated. The worksheet submitted as evidence for demonstration of conformance with the risk criteria selected did not include a comparison of IRR as the NPV analysis of all identified baseline scenarios with references to all data sources, assumptions, and parameters used to conduct the NPV analysis. The VCS AFOLU Non-Permanence Risk Tool requires all data to be clearly referenced to ensure transparency in financial assessments.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012.doc FSM_REDD_VCS_PD_V1.2_24_02_2012

	!!tec3-0408_FLUXO DE CAIXA_TIR.pdf !amazoniasustentavel_TIR_4,2.pdf ANSWERS TO RA QUESTION 6_04_04_2012.doc AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO - 10%NPV.xls AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ - 10% NPV.xls
Findings for Evaluation of Evidence:	In the first version of the PD, the PP compared IRR from alternative baseline scenarios against the project scenario. IRRs were based on literature values for baseline land uses (coffee and cattle) and compared with calculated IRRs for the project scenario including two alternatives, continued management practices with revenue generated from harvesting activities within the FSM farm, and revenue generated from harvesting activities with combined revenue generated from the sale of carbon credits resulting from the REDD project activity. In order to address this NCR, the PP has submitted two additional financial calculations which include an NPV analysis comparing the continued harvesting activities within the FSM farm, and the continued harvesting activities within the FSM farm combined with additional revenue generated from the sale of carbon credits resulting from REDD project activities. This quantification is completed in the worksheet titled "Consolidade CF" of the document titled "AVAILACAO_DA_MADEIRA_MAIS_REDD_TX REAL X US$ - 10%NPV.xls", and was reviewed by the audit team. The PP presented two scenarios within the NPV analysis to evaluate the impact of the price of VCSs and the exchange rate between Real and USD. The NPV was conducted using the most conservative values within each of the ranges used in the sensitivity analysis. Further, the assumptions associated with baseline scenario IRR we explained to the audit team, and referenced documents were provided to the audit team. In order to compare the calculated NPV of the project scenario with the baseline scenarios, the PP compared the most profitable alternative land use activity (coffee cultivation) to the calculated project scenario NPV. The results clearly showed the project scenario NPV was significantly higher (greater than 50% higher) than the most profitable alternative land use scenario. Further the PP compared NPV for cattle production from the literature which applied a 6% discount rate (compared to the 12.7% discount rate applied to the project scenario) and identified a negative NPV. The literature references for cattle production NPV were provided to the audit team and found to be appropriate. Following the review of revised documents, the PP has now prepared an appropriate NPV analysis of the project activities, and compared these results with credible data on alternative baseline scenarios to demonstrate the project scenario is greater than 50% more profitable than the most profitable alternative land use activity. As such the PP has evaluated the opportunity cost risk in conformance with the VCS AFOLU Non-Permanence Risk Tool.
NCR Status:	CLOSED
Comments (optional):	Not applicable

NCR#:	22/12
Standard & Requirement:	VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1
Report Section:	11.3
Description of Non-conformance and Related Evidence:	
The project has determined that there is no risk of Pest and Disease Outbreaks, Extreme Weather, Geologic Risk, and an insignificant risk of Blow-Down Wind. However, the project provides no supporting references to justify these claims. As such the evidence provided within the risk assessment report is not sufficient to demonstrate that no risk of other non-fire natural risks exists within the project area.	
Corrective Action Request:	Organization shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.

Timeline for Conformance:	Prior to validation
Evidence Provided by Organization:	ANSWER REPORT_24_02_2012 FSM_REDD_VCS_PD_V1.2_24_02_2012
Findings for Evaluation of Evidence:	Annex 2 of the revised PD includes additional justification for the risk ratings associated with Pest and Disease Outbreaks, Extreme Weather, Geologic Risk and risk of Blow-Down Wind. Specifically the revised text includes the following: <u>Pest and Disease Outbreaks:</u> The project has provided a professional opinion from D. Jean Ometto of INPE supporting the low risk of pest and disease outbreaks within the project area. The low risk is namely driven by the diverse composition of native species, creating greater resiliency within the forest. This evidence and justification was found to be sufficient to support the risk rating of 0. <u>Extreme Weather:</u> The project document has not revised the text in this section, however the PD does state that there is no record of any extreme event within the project area in more than 80 years, and that the project area is not affected by hurricanes, floods, etc. Based on the auditor's professional experience, this statement is found to be appropriate given the project location. As fires and windthrow (the dominant disturbance types within the project area) are addressed in separate risk categories, this justification is found to be appropriate. <u>Geologic Risk:</u> The text has been revised to include a justification why the project area has a low risk related to geologic disturbances. The PD references supporting journal articles (e.g. Allen et al. 1999, Ren et al. 2009, and Tominaga et al. 2009) to further evidence the low risk of earthquake and landslides within the project area. Further, during the field audit, the audit team confirmed the lack of dramatic topography within the project area that would be susceptible to landslides. As such the revised text was found to be appropriate to support the 0 risk rating of Geologic Risk. <u>Blow-Down Wind:</u> The revised text within the PD references a scientific opinion provided by Dr. Jean Ometto of INPE. In this letter Dr. Ometto notes that the occurrence of blow-down in response to strong winds is a natural occurrence within the Tropical Amazon. However, Dr. Ometto references Gloor et al. (2009) that found the spatial scale of such occurrences to be small in size, where large scale disturbances of >30ha are much less frequent. Dr. Ometto goes on to state that following the small-scale disturbance from windthrow, the forest recooperates biomass through succession, and cites Malhi et al. (2003) as evidence that the actual loss of carbon from such events is negligible. The justification provided by the project proponent was found to be appropriate to support the 0 risk rating associated with Blow-Down Wind. The revised Annex 2 of the PD, the justifications provided to support Natural Risk ratings were found to be appropriate, and as such this NCR is closed.
NCR Status:	CLOSED
Comments (optional):	Not applicable

2.3 Observations

Note: Observations are issued for areas that the auditor sees the potential for improvement in implementing standard requirements or in the quality system; observations may lead to direct non-conformances if not addressed. <u>Unlike NCRs, observations are not formally closed. Findings from the field audit related to observations are discussed in Appendix A below.</u>

OBS	01/12	Reference Standard & Requirement:	VCS v.3.1 & 1.5 VCS AFOLU Requirements Section 3.1.3: Identification of Project Proponent
Description of findings leading to observation:	K_2C Florestal was replaced by Plant Inteligência Ambiental in 2010, however the document Memorando de Entendimentos (Doc.#14) was not updated.		
Observation:	The project proponent should updated the document Memorando de Entendimentos, replaced K_2C by Plant Inteligência Ambiental.		

OBS	02/12	Reference Standard & Requirement:	VT0001 (VM0007 T-ADD)
Description of findings leading to observation:	According to T-ADD, the previous steps shall be complemented with an analysis of the extent to which similar activities have already diffused in the geographical area of the proposed VCS AFOLU project activity. This test is a credibility check to demonstrate additionality that complements the barrier analysis (Step 3) and the investment analysis (Step 2). Even though this information can be extracted from the PD, from different sections, there is no specific one summarizing the common practice analysis.		
Observation:	The Project Proponent should provide further information in the PD, in accordance with STEP 4 of T-ADD, regarding common practice analysis (see Item 2.5.2 of T-ADD), following the barrier analysis argumentation in the PD.		

OBS	03/12	Reference Standard & Requirement:	VCS AFOLU Requirement Section 4.6.3
Description of findings leading to observation:	Application of required activity shifting leakage and market leakage modules was reviewed by audit team with PLANT staff responsible for GHG calculations. As noted above, the audit team found the leakage calculations to be in conformance with the requirements of the modules. The project assumes leakage mitigation activities will be 90% effective. It is not clear how effective leakage mitigation activities will be in Leakage Belt communities, as such this high effectiveness rate does not seem conservative. As leakage will be monitored in the project scenario the project is in conformance with the methodology requirements, however the audit team does not consider the assumed 90% effectiveness to be conservative leakage calculation.		
Observation:	The Project Proponent should consider using a more conservative effectiveness rating of leakage mitigation activities.		

OBS	04/12	Reference Standard & Requirement:	VCS Version 3 and VM0007
Description of findings leading to observation:	During field audit, the audit team noticed that, because of the way the sample plots were delineated, some trees that were outside of the plot boundaries were measured as if they were inside the plot, and others that were inside the plots were not measured as if they were out of the plots. If these errors occur in a systematic way, the biomass estimation can be ether over or sub estimated. Also, some tree diameters were not re-measured at 1.3 m high, which corresponds to a deviation in the forest inventory procedures. Comparison of re-measured plot data to original inventory plot data suggests that measurement errors are systematic, as such a nonconformance was raised in relation to this issue in section 5.3 of this report. Systematic nonconformance with.		
Observation:	Project proponents should address in the inventory crew training systematic failure to follow monitoring plan SOPs, in order to avoid the over- or under-estimation of the forest biomass in future carbon inventories.		

OBS	05/2011	Reference Standard & Requirement:	VCS v.3.1 & 10.1Findings from stakeholder comments received
Description of findings leading to observation:	During the field audit, the project proponent committed himself after validation process to build a permanent communication channel between stakeholders and project proponent as well as notified the local's authorities. However, it is not described in the PD v.1.1.		

Observation:	The project proponent should describe in the PDD the commitment regarding the project communication and formalize a mechanism that the project proponent will precede with the stakeholders comments received.

2.4 Actions taken by the Project Proponent address NCRs (including any resolution of material discrepancy)

Action Taken by Project Proponent following the issuance of the Draft Report		Date
Additional documents submitted to audit team (additional documents listed below)	☒ Yes ☐ No ☐ N/A	24 Feb 2012
Additional stakeholder consultation conducted (evidence described below)	☐ Yes ☒ No ☐ N/A	NA
Additional clarification provided	☒ Yes ☐ No ☐ N/A	24 Feb 2012, 27 March 2012, and 05 April 2012
Documents revised (document revision description noted below)	☒ Yes ☐ No ☐ N/A	24 Feb 2012
GHG calculation revised (evidence described below)	☒ Yes ☐ No ☐ N/A	24 Feb 2012

Included in the actions taken by the Project Proponent to address NCRs was the submission of the following revised files:

Ref	Title, Author(s), Version, Date	Electronic Filename
1a.	PD v. 1.2. 24 FEV. 2012	FSM_REDD_VCS_PD_V1.2_24_02_2012.doc
2a.	REDD Estimates. 16 February 2012.	!!REDD_ESTIMATES_16_02_2012.xls
3a.	IBGE Birth Data for Colniza. 2006.	Colniza_vida2006.csv
4a.	IBGE Birth Data for Colniza. 2007.	Colniza_vida2007.csv
5a.	IBGE Birth Data for Colniza. 2008.	Colniza_vida2008.csv
6a.	IBGE Birth Data for Colniza. 2009.	Colniza_vida2009.csv
7a.	IBGE Estimates of resident population. 1 September 2004.	POP2004-TCU.xls
8a.	IBGE Estimates of resident population. 1 September 2005.	POP2005-DOU.xls
9a.	IBGE Estimates of resident population. 1 September 2006.	POP2006-TCU
10a.	IBGE Estimates of resident population. 1 July 2008.	POP2008-DOU.xls
11a.	Letter from the Colniza Municipality - Population growth, 2000 - 2010. 1 December 2011.	scan0914.pdf
12a.	Censos 2007 - Population census and estimated.	tabela1_1_25_2007.pdf
13a.	IBGE Estimates of resident population. 1 July 2009.	UF_Municipio_2009.xls
14a.	Saatchi et al. Distribution of Aboveground Live Biomass	
in the Amazon Basin. January 2006.	Saatchi_GCB_revised_small_157.66.pdf	
15a.	Financial additionality analysis - main spreadsheet.	AVALIACAO_DA_MADEIRA__MAIS_REDD-PLANILHA BASICA.xls
16a.	Financial additionality analysis - Sensitivity analysis I.	AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO - 10%.xls
17a.	Financial additionality analysis - Sensitivity analysis II.	AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO + 10%.xls
18a.	Financial additionality analysis - Sensitivity analysis III.	AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ - 10%.xls
19a.	Financial additionality analysis - Sensitivity analysis IV.	AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ +10%.xls
20a.	Financial additionality analysis - Sensitivity analysis. Resume.	RESUMO ANALISE DE SENSIBILIDADE.xlsx
21a.	Financial additionality analysis - Sensitivity analysis. Resume.	SENSITIVITY ANALYSIS_en.xlsx
22a.	Financial additionality analysis - Weighted average cost	WACC.docx

	of capital.	
23a.	Projeto de alocação de área de Leakage belt e análise de risco de desmatamento. May 2011.	DEFORESTATION RISK ANALYSIS_PAGE 7.pdf
24a.	Figure of Merit Maps	FIGURE OF MERIT_FOM_MAPS.ppt
25a.	Processamento digital das imagens de satélite no projeto da Fazenda Santa Maria.	QA_QC_IMAGERY.pdf
26a.	Avaliação de sensibilidade do modelo de desmatamento utilizado no projeto. February 2012.	SENSITIVITY DEFORESTATION RISK MODEL.pdf
27a.	Mapas da avaliação de sensibilidade do modelo de desmatamento utilizado no projeto. February 2012.	SENSITIVITY DEFORESTATION RISK MODEL.pptx
28a.	Simulation Model Maps.	SIMULATION MODEL MAPS.ppt
29a.	Data from Transect 01.	dados_transectos_01_101020_rev.xls
30a.	Data from Transect 02.	dados_transectos_02_101020_rev.xls
31a.	Data from Transect 03.	dados_transectos_03_101122_rev.xls
32a.	Data from Transect 04.	dados_transectos_04_101118_rev.xls
33a.	Data from Transect 05.	dados_transectos_05_101124_rev.xls
34a.	Data from Transect 06.	dados_transectos_06_101117_rev.xls
35a.	Data from Transect 07.	dados_transectos_07_101119_rev.xls
36a.	Data from Transect 08.	dados_transectos_08_101119_rev.xls
37a.	Data from Transect 09	dados_transectos_09_101026_rev.xls
38a.	Data from Transect 10.	dados_transectos_10_101111_rev.xls
39a.	Data from Transect 11.	dados_transectos_11_101109_rev.xls
40a.	Data from Transect 12.	dados_transectos_12_101124_rev.xls
41a.	Data from Transect 13.	dados_transectos_13_101104_rev.xls
42a.	Data from Transect 14.	dados_transectos_14_101029_rev.xls
43a.	Data from Transect 15.	dados_transectos_15_101027_rev.xls
44a.	Data from Transect 16.	dados_transectos_16_101021_rev.xls
45a.	Data from Transect 17.	dados_transectos_17_101026_rev.xls
46a.	Data from Transect 18.	dados_transectos_18_101022_rev.xls
47a.	Height Test.	HEIGHT_TEST.xls
48a.	Test N conclusion.	CONCLUSION_TEST_N.xls
49a.	REDD Inventory SOP v.1. 23 February 2012.	SOP_inventario_REDD_23_02_2012_V1.doc
50a.	REDD Inventory SOP v.2. 23 February 2012.	SOP_inventario_REDD_23_02_2012_V2.doc
51a.	Test N.	TESTE_N.xls
52a.	Controle patrimonial da fazenda e Prevenção / combate a incêndios. 13 December 2011.	Procedimento FSM P-02 Controle ... a Incendio Final para validaçao do grupo 20_02_2012.docx
53a.	FSM Responses to Rainforest Alliance Draft Validation Report 24 February 2012	ANSWER REPORT_24_02_2012.doc
54a.	Colpini et al., Determinação do volume, do fator de forma e da porcentagem de casca de árvores individuais em uma Floresta Ombrófila Aberta na região noroeste de Mato Grosso, ACTA Amazonica, vol. 39 (1) 2009	COLPINI.pdf
55a.	Nogueira et al., Estimates of forest biomass in the Brazilian Amazon: New allometric equations and adjustments to biomass from wood-volume inventories, Forest Ecology and Management, 2008	NOGUEIRA.pdf
56a.	Saldarraiga et al., Long-term Chronsequence of Forest Succession in the Uperr Rio Negro of Colombia and Venezuala, Journal of Ecology, vol 76 (4) 1988.	SALDARRIAGA.pdf
57a.	Evidencia Controle de LigaçSes e Contatos com as BASES de Monitoramento eou os Monitores Florestais, December 2011	Evidencia Controle de LigaçSes e Contatos com as BASES de Monitoramento eou os Monitores Florestais.pdf
58a.	Evidencia Controle de LigaçSes e Contatos com o Gernete de Logistica e ou a BASE 01, December 2011	Evidencia Controle de LigaçSes e Contatos com o Gernete de Logistica e ou a BASE 01.pdf

59a.	Evidencia Registro de Atividades dos Monitores Florestais, December 2011	Evidencia Registro de Atividades dos Monitores Florestais.pdf
60a.	Evidencia Registro de Ocorrencia, December 2011	Evidencia Registro de Ocorrencia.pdf
61a.	Adaptive Management Plan for FSM Farm, 13 December 2011.	Procedimento FSM P-02 Controle ... a Incendio Final para validaçao do grupo 20_02_2012.pdf
62a.	Letter from Jean P. Ometto, Centro de Ciências do Sistema Terrestre (CST/INPE), 06 February 2012	Blowdown_Pest outbreak_AMZ_JOmetto.pdf
63a.	Tominaga et al., Desastres Naturais Conhecer para prevenir, Instituto Geológico Secretaria do Meio Ambiente Governo do Estado de São Paulo, 2009	TOMINAGA.pdf
64a.	Response to RA queries, FSM, 27 March 2012	ANSWERS TO RA EMAIL_27_03_2012.doc
65a.	Aredes and Pereira, ANÁLISE ECONÔMICA DA PRODUÇÃO DE CAFÉ ARÁBICA: um estudo de caso com simulações de Monte Carlo para sistemas de baixa e alta produtividade, Informacoes Economicas, 2008	!!tec3-0408_FLUXO DE CAIXA_TIR.pdf
66a.	Schneider et al, Amazônia Sustentável: limitantes e oportunidades para o desenvolvimento rural, IMAZON, 2000	!amazoniasustentavel_TIR_4,2.pdf
67a.	FSM clarification response to NCR 21/12, 05 April 2012	ANSWERS TO RA QUESTION 6_04_04_2012.doc
68a.	AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO - 10%NPV	AVALIACAO_DA_MADEIRA__MAIS_REDD-PREÇO CARBONO - 10%NPV.xls
69a.	AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ - 10% NPV	AVALIACAO_DA_MADEIRA__MAIS_REDD-TX REAL X US$ - 10% NPV.xls

3 Audit Methodology

3.1 Audit Team

Overview of roles and responsibilities:

Auditor(s)	Responsibilities							
	Lead	Desk Review	On-site visit	Climate Specialist	Biodiversity Specialist	Social Specialist	Report	Senior Internal Review
Jared Nunery	☒	☒	☒	☒	☐	☐	☒	☐
Talia Bonfante	☐	☒	☒	☐	☒	☐	☒	☐
Thales West	☐	☐	☒	☐	☒	☒	☒	☐
Jeffrey Hayward	☐	☐	☐	☐	☐	☐	☐	☒

Auditor qualifications:

Auditor(s)	Qualifications
Jared Nunery, Lead Auditor	Jared has led the technical review of multiple validation assessments for the VCS. In addition he has participated in two Improved Forest Management methodological reviews for the VCS. Before joining the Rainforest Alliance, Jared worked as a member of the Carbon Dynamics Lab at the University of Vermont, where he conducted research on the effects of forest management on carbon sequestration. Jared has published multiple scientific articles on forest carbon dynamics as well as general forest ecological processes. Jared has a B.S. in Environmental Sciences from the University of Vermont and earned his M.Sc. in Forestry from the University of Vermont. Jared has extensive experience in forest stand dynamics, forest carbon dynamics, forest mensuration, GHG quantification, forest growth and yield modelling, and wildlife habitat conservation. In addition Jared is a certified lead auditor with the Climate Action Reserve for Forest and Urban Forest projects. Additionally, Jared is an IFM AFOLU Expert with the Verified Carbon Standard.
Talia Bonfante, Auditor	Biologist and expert in Integrated Management Systems - Health, Environment and Security. Talia received her Master's degree in the program of Management of Organizations FEA - USP, where she studied the economic viability of small scale projects included in the CDM. She has experience in social and environmental audits (FSC, CCB, VCS standards) as well in research related to the carbon market and socio-environmental responsibility. She has project strong expertise in biodiversity assessment, forest management, and nuanced local context issues that are important to consider when assessing conformance against the CCB standards.
Thales West, Auditor	Forest Engineer and M.Sc. in Forest Resources, both from the University of São Paulo, studying forest management and carbon project activities. Thales holds a specialization in Business Management from Fundação Getúlio Vargas and has worked for several companies as consultant in forest carbon projects, under the CDM and voluntary carbon market schemes.
Jeffrey Hayward, Senior Internal Reviewer	Jeff Hayward is Director, Climate Program at the Rainforest Alliance. Based in Washington, DC, he leads a global program active in carbon verification, best practices and standards for climate mitigation and adaptation, REDD+ capacity building, and facilitation of carbon forestry and agroforestry projects. He has 20 years experience working to advance sustainability in natural resource management, particularly through policy mechanisms that harness markets responsibly. For nearly six years he managed the Rainforest Alliance forest certification programs in the Asia-Pacific region from Jakarta, Indonesia. Jeff earned an Msci in forestry, (Univ. of British Columbia, Canada); and a B.A. in Latin American development with a specialization on forestry (Univ. of Washington, USA). In forest certification and carbon verification, he has

	conducted over 100 assessments or audits. Jeff is a registered AFOLU expert with VCS and lead verifier with Climate Action Reserve.

3.2 Description of the Audit Process

The audit was conducted in a two-step process. The first step consisting of a pre-validation audit conducted as a desk review of all project materials. Following the pre-validation audit, the pre-validation report was delivered to the project proponent, identifying any significant gaps within the project documentation. The second step in the audit process included the field audit to the project area. Below is a description of the field audit process and list of documents reviewed during the field audit.

Location/Facility	Date(s)	Length of Audit	Auditor(s)
Florestal Santa Maria Office – Base 1	31 Oct 11	2 hours	Jared Nunery, Talia Bonfante, Thales West
Florestal Santa Maria Office – Base 1	31 Oct 11	4 hours	Jared Nunery, Thales West
Florestal Santa Maria Office – Base 1	31 Oct 11	4 hours	Talia Bonfante
Florestal Santa Maria Active Harvest UT-07	01 Nov 11	2 hours	Jared Nunery, Talia Bonfante, Thales West
Florestal Santa Maria Inventory Transect 10 P91SB01 and P92SB1	01 Nov 11	6 hours	Jared Nunery, Talia Bonfante, Thales West
Florestal Santa Maria Inventory Transect 5 P42SB5	02 Nov 11	3 hours	Jared Nunery, Talia Bonfante, Thales West
Florestal Santa Maria Inventory Transect 2 P12SB1	02 Nov 11	2 hours	Jared Nunery, Talia Bonfante, Thales West
Florestal Santa Maria Office Base 1	02 Nov 11	5 hours	Jared Nunery
Florestal Santa Maria Office Base 1	02 Nov 11	5 hours	Talia Bonfante, Thales West
Florestal Santa Maria Office Base 1	03 Nov 11	8 hours	Jared Nunery, Thales West
Florestal Santa Maria Office Base 1	03 Nov 11	6 hours	Talia Bonfante
Florestal Santa Maria Office Base 1	04 Nov 11	4 hours	Jared Nunery, Talia Bonfante, Thales West

3.3 Review of Documents

The following documents were viewed as a part of the field audit:

Ref	Title, Author(s), Version, Date	Electronic Filename
1	Florestal Santa Maria and Bunge emissions Fund Limited. Agreement for the sale and purchase of REDD Unitis generated by Florestal Santa Maria REDD+ project in Colniza, situated in the State of Mato Grosso in the Federal republic of Brazil. Dated 17 February 2011.	Printed
2	Project Idea Note (PIN) – Florestal Santa Maria REDD+ Project. Draft v.2. October 7, 2009. Participants: Florestal Santa Maria, K2C, VO2 Desenvolvimento Empresarial and Pinheiro Neto Advogados.	Printed Físico – Anexo Contrato FSM/Bungue
3	6º Serviço notarial e Registro de Imóveis da Terceira Circunscrição Imobiliária. Cuiabá- Mato Grosso. Livro Nº 2-NQ- registro Geral. Matrícula 73.958 – Folha 130. Dentro desta matricula: AV-01-73.958: Termo de Responsabilidade de Manutenção de Floresta Manejada- TRMFM. 12/07/2002. Celebra entre a proprietária desta	02 Matricula 73958 da Fazenda Florestal Santa Maria.pdf
4	Certidão FUNAI. Ofício Nº 036/DIF/GAB/ERA/CGB. Cuiabá/MT, 23 abril de 2003.	05 Certidão FUNAI da Fazenda Florestal Santa

		Maria.pdf
5	Memorando de Entendimentos. 19 Março 2009. Florestal Santa Maria SA, VO2 Desenvolvimento Empresarial LTDA, Pinheiro Neto Advogados, K2C.	Memorando de Entendimentos.pdf
6	Comprovante de Registro Junto ao Ibama da Filial Colniza Florestal Santa Maria S/A. Data Emissão: 04/07/2008. Autenticação: urvy.t1ue.uwxu.uynl	Printed
7	Certidão Negativa de Débito junto ao IBAMA da Filial Colniza Florestal Santa Maria S/A. Data emissão: 25/10/11. Válido até: 24/11/11. Número da Certidão: 2556597.	Printed
8	Certidão Negativa de Débito junto à SEMA da Florestal Santa Maria S/A. Data emissão: 27/10/11. Número da Certidão: 052747.	Printed
9	Licença Ambiental Única Nº 7393/2009. Validade: 27/12/2017.	Printed
10	Boletim de Ocorrência – por parte de Sergio Lunardelli. Entrada de pessoas desconhecidas na área da fazenda Florestal Santa Maria, com o objetivo de 'grilar' e extração de madeira sem autorização do proprietário da fazenda.	Printed
11	Mandato de reintegração de posse. Poder Judiciário Comarca de Aripuanã – Processo:2004\G54. Aripuanã, 1 fevereiro, 2005. Assinado pela Juíza Aline Luciane Ribeiro Viana Quinto.	Printed
12	Comprovante de Transferência de recursos – Data: 13/04/2009 K2C Serviços de Consultoria Empr (R$ 18.000).	Printed
13	Licenses Proof (Lau –Single Environmental License and AUTEX - Authorization for Forest Exploitation). See Right.	01 Licença Ambiental Ünica - LAU da Fazenda Florestal Santa Maria junto a SEMA - MT.pdf 14 AUTEX Autorização de Exploração Florestal de Manejo da UPA 2 e 3 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf 15 AUTEX Renovação da Autorização de Exploração Florestal de Manejo da UPA 2 e 3 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf 16 Comprovação de Liberação de Crédito Florestal da AUTEX da UPA 2 e 3 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf 17 AUTEX Autorização de Exploração Florestal de Manejo da UPA 23 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf 18 Comprovação de Liberação de Crédito Florestal da AUTEX da UPA 23 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf 19 AUTEX Autorização de Exploração Florestal de Manejo da UPA 24 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf 20 Comprovação de Liberação de Crédito Florestal

		da AUTEX da UPA 24 da Fazenda Floretal Santa Maria junto a SEMA-MT.pdf
14	Memorando de Entendimentos. 18 March 2009.	Memorando de Entendimentos.pdf
15	Termino do Memorando de entendimentos entre FSM e K2C. 11 May 2010.	Termino do Memorando de Entendimentos entre FSM e K2C.pdf
16	Resposta da K2C ao Termino do Memorando de entendimentos entre FSM e K2C. 13 May 2010.	ENC Formalização de término do Memorando de Entendimentos.msg
17	KML Files	kml.zip
18	Certidão FUNAI da Fazenda Florestal Santa Maria. 2003	05 Certidão FUNAI da Fazenda Florestal Santa Maria.pdf
19	Memorial Descritivo da Certificação do Georreferenciamento da Fazenda Florestal Santa Maria pelo INCRA. 2004.	08 Memorial Descritivo da Certificação do Georreferenciamento da Fazenda Florestal Santa Maria pelo INCRA.pdf
20	Escritura de Remebramento da Fazenda Florestal Santa Maria. 2002	01 Escritura de Remebramento da Fazenda Florestal Santa Maria.pdf
21	Declaração de ITR.2011	11 Declaração de ITR.pdf
22	Certificado de Cadastro de Imovel Rural CCIR da Fazenda Florestal Santa Maria junto ao INCRA.	10 Certificado de Cadastro de Imovel Rural CCIR da Fazenda Florestal Santa Maria junto ao INCRA.pdf
23	FSM REDD VCS PD, v.1.1, 03Dec11	FSM_REDD_VCS_PD_V1.1.doc
24	REDD Estimates	REDD_ESTIMATES_27_09_2011.xls
25	Financial analysis spreadsheet	AVALIACAO_DA_MADEIRA__MAIS_REDD-AUDITORIA_REV1 setape c protecao.xls
26	Transects map	GERENCIAL_TRANSECTOS.pdf
27	Sandro Marostica CV	CVSandroFSM.doc
28	Warwick Manfrinato CV	CV-Warwick Manfrinato-2011-English NOV.pdf
29	Luis Fernando CV	Luiz_Fernando_de_Moura-CV_en_21_11_11
30	FSM Projeto de alocação de área de Leakage belt e análise de risco de desmatamento, v4 2011	Relatoriofinal_v4.doc
31	FSM Project leakage belt area allocation and deforestation risk analysis	Apresentacao_projeto.pdf
32	FSM GIS Maps (11 maps used in remote sensing analysis)	Collection of PDFs provided in folder titled “layouts”
33	Mapa Imagem Gerencial Fazenda Florestal Santa Maria	24 Mapa Imagem Gerencial Fazenda Florestal Santa Maria
34	Transect Inventory Spreadsheet_T01	dados_transectos_01_101020.xls
35	Transect Inventory Spreadsheet_T02	dados_transectos_02_101020.xls
36	Transect Inventory Spreadsheet_T03	dados_transectos_03_101122.xls
37	Transect Inventory Spreadsheet_T04	dados_transectos_04_101118.xls
38	Transect Inventory Spreadsheet_T05	!dados_transectos_05_101124.xls
39	Transect Inventory Spreadsheet_T06	dados_transectos_06_101117.xls
40	Transect Inventory Spreadsheet_T07	dados_transectos_07_101119.xls
41	Transect Inventory Spreadsheet_T08	dados_transectos_08_101119.xls
42	Transect Inventory Spreadsheet_T09	dados_transectos_09_101026.xls
43	Transect Inventory Spreadsheet_T010	dados_transectos_10_101110.xls
44	Transect Inventory Spreadsheet_T011	dados_transectos_11_101109.xls
45	Transect Inventory Spreadsheet_T012	dados_transectos_12_101124.xls
46	Transect Inventory Spreadsheet_T013	dados_transectos_13_101104.xls
47	Transect Inventory Spreadsheet_T014	!dados_transectos_14_101029.xls
48	Transect Inventory Spreadsheet_T015	dados_transectos_15_101027.xls
49	Transect Inventory Spreadsheet_T016	dados_transectos_16_101021.xls
50	Transect Inventory Spreadsheet_T017	dados_transectos_17_101026.xls

51	Transect Inventory Spreadsheet_T018	dados_transectos_18_101022.xls
52	Sample Plot Calculation	N_PARCELA.xls
53	Steering Committee Minutes from FSM Management Team	Minutes from meetings on 04Jul11, 27Sept11, and 29Jun11 were provided to the audit team.
54	Voluntary Credit Purchase Agreement (VERPA)	Printed
55	027296 MAOA-IMAGEM DO IMOVER – Map of project area denoting APP	Printed
56	Licenence Ambiental Unica –LAU 21Nov2005 SEMA MT	Printed
57	Field Data Sheets from Biomass Inventory for Transect 5	Printed
58	Field Data Sheets from Biomass Inventory for Transect 4	Printed

3.4 Interviews

The following is a list of the people interviewed as part of the audit. The interviewees included those people directly, and in some cases indirectly, involved and/or affected by the project activities.

Audit Date	Name	Title
01 Nov 2011	Gleiton Gonçalves de Carvalho	Forest Management Worker and Involved in Forest Inventory
01 Nov 2011	Fabio Milanis Gonçalves	Forest Management Worker and Involved in Forest Inventory
01 Nov 2011	Welligton Baubino Ferreira	Forest Management Worker
01 Nov 2011	Claudeir de Oliveira	Forest Management Worker
01 Nov 2011	Magno Lopes Pereira	Forest Management Worker
01 Nov 2011	Marcelo Eduardo Lopes Pereira	Forest Management Worker
02 Nov 2011	Gleiton Gonçalves de Carvalho	Forest Management Worker and Involved in Forest Inventory
02 Nov 2011	Isac Bueno de Campos	Forest Management Worker and Involved in Forest Inventory
02 Nov 2011	Fabio Milanis Gonçalves	Forest Management Worker and Involved in Forest Inventory
31 Oct to 04 Nov 2011	Rubens Forbes Alves de Lima	CEO and Land Ownership - Florestal Santa Maria S.A.
31 Oct to 04 Nov 2011	Marcelo Martins Lunardelli	Administrative and Financial Director
31 Oct to 04 Nov 2011	Warwick do Amaral Manfrinato	CEO and founder, team leader of technical project development – Plant Inteligencia Ambiental Ltda
31 Oct to 04 Nov 2011	Luiz Fernando de Moura	Technical Advisory – Plant Inteligência Ambiental Ltda
31 Oct to 04 Nov 2011	Sandro T. Marostica	Bunge Emissions Group's Manager Brazil
31 Oct to 04 Nov 2011	André Vivan de Souza	Legal Advisory - Pinheiro Neto Advogados
31 Oct to 04 Nov 2011	André Moraes Barros	Project Coordination and Advice to Florestal Santa Maria S.A - VO2 Desenvolvimento Empresarial
31 Oct to 04 Nov 2011	Octávio de Guimarães Horta	Project Coordination and Advice to Florestal Santa Maria S.A - VO2 Desenvolvimento Empresarial
02 – 04 Nov 2011	Jhonathan J. Borella	Consultant – Savana Assessoria e Projetos Ambientais
29Nov11	Timóteo A. Schwebel	Engineer surveyor from Geomapas

APPENDIX A: Field Audit Findings

Note: Findings presented in this section are specific to the findings resulting from the field audit as presented in the Draft Audit Report. Any non-conformances or observations identified during the field audit are noted in this section, and specific NCR and OBS tables are included in section 2 of this report for each identified non-conformance and observations. All findings related to audit team review of additional evidence submitted by the Project Proponent following the issuance of the Draft Audit Report by Rainforest Alliance, are included within section 2 of this report.

1 General Requirements

1.1 VCS Standard Section 3.2 and VCS AFOLU Requirements Section 3.1.7: Multiple project activities

Projects may include multiple project activities where the methodology applied to the project allows more than one project activity and/or where projects apply more than one methodology. Such projects shall comply with the respective project requirements of each included AFOLU category. For example, projects that combine agroforestry or enrichment planting with community forestry in a single project where farmers integrate these activities within a single landscape shall follow an ARR methodology for planting activities and an IFM methodology for community forestry activities (except where the activities have been combined in a single methodology). For each activity covered by a different methodology, the geographic extent of the area to which the methodology is applied shall be clearly delineated. Where more than one methodology has been applied to a project with multiple project activities, the requirements outlined in Section 3.2 of the VCS Standard must be met.

Findings from Review on 13 JANUARY 2012			
The project includes a single project activity and applies one methodology (VM0007 v.1.0).			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not Applicable		

1.2 VCS Standard Section 3.4 and VCS AFOLU Requirements Section 3.7: Grouped projects

Grouped projects are projects structured to allow the expansion of a project activity subsequent to project validation. Validation is based upon the initial project activity instances identified in the project description. The project description sets out the geographic areas within which new project activity instances may be developed and the eligibility criteria for their inclusion. New instances meeting these pre-established criteria may then be added to the project subsequent to project validation, as set out in the sections below. Section 3.4 of the VCS standard provides the requirements for all grouped projects, which are further expanded upon in VCS document AFOLU Requirements Section 3.7.

Findings from Review on 13 JANUARY 2012			
The proposed project is not a grouped project.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not Applicable		

1.3 VCS Standard Sections 3.12.2 – 3.12.5: Linkage to other GHG programs and trading schemes

For those projects previously or currently involved in other GHG program or emission trading schemes, the project shall document how it meets the requirements of the VCS Standard Sections 3.12.2 thru 3.12.5.

Findings from Review on 13 JANUARY 2012			
In section 1.12.3 of the PD v.1.1 it is stated that "*This project has not been registered, and is not seeking registration under any other GHG programs*". The audit team confirmed this information during the audit field with the project proponent. In addition the audit team verified that the project was not registered with other GHG programs or emission trading schemes. The audit team confirmed that the project was not previously or currently involved in other GHG program or emission trading schemes and did not find the project registered under voluntary market and no evidence that the project had been rejected by others GHG Programs.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

1.4 VCS AFOLU Requirements Section 3.1.2: Compliance with applicable laws and regulations

Implementation of the project activities shall not lead to the violation of any applicable law, regardless of whether or not the law is enforced.

Findings from Review on 13 JANUARY 2012
In Section 1.11 of the PD v.1.1 the legal framework is explained in which the project is immersed. During the audit field the project proponent provided to audit team all the documents to proof that the project activities is in compliance with Brazilian applicable laws and regulations, such as Brazilian Forest Code (Docs.#3,7,8,9) and Mato Grosso regulation for Forest

Management Activities (Sustainable Forest Stewardship Plan previously approved by the SEMA/MT – Doc.#13).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

1.5 VCS AFOLU Requirements Section 3.1.3: Identification of Project Proponent

Where an implementation partner is acting in partnership with the project proponent, the implementation partner shall be identified in the project description. The implementation partner shall identify its roles and responsibilities with respect to the project, including but not limited to, implementation, management and monitoring of the project, over the project crediting period.

Findings from Review on 13 JANUARY 2012			
In Sections 1.3 and 1.4 of the PD v.1.1 it is clearly identified that Florestal Santa Maria S.A is the project proponent and which organizations are involved in the project, included their roles and responsibilities. During the field audit, the audit team was able to confirm the information pointed in the PD v.1 by interviewing representatives of the project proponent and the partner organizations. Furthermore evidence was provided by the project proponent in the document 'Memorando de Entendimentos' (Doc.#14) between the project proponent and the project partners, where is described their roles and responsibilities in greater detail than at the PD v.1. However in this document the technical advisory was played by K_2C Florestal that in 2010 was replaced by Plant Inteligência Ambiental (Docs.#15 e 16). Interviews with project participants confirmed a clear understanding on participant roles and responsibilities, and that Plant Inteligência Ambiental has now replaced those of K_2C Florestal. As such the audit team has found that the project meets this criteria.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	**OBS 01/12**		

1.6 VCS Standard Section 3.19.2: Commercially sensitive information

All information in the project documents shall be presumed to be available for public review, though commercially sensitive information may be protected, as set out in VCS document *Registration and Issuance Process*, where it can be demonstrated that such information is commercially sensitive. The validation/verification body shall check that any information designated by the project proponent as commercially sensitive meets the VCS Program definition of commercially sensitive information. Information in the project documents related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions and removals shall not be considered to be commercially sensitive and shall be provided in the public versions of the project documents.

Findings from Review on 13 JANUARY 2012			
In the PD v.1.1 is not mentioned that the project has commercially sensitive information.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

2 Project Design

2.1 VCS Standard Section 3.19.1: Project description

The project shall include at a minimum all requirements outlined in section 3.19.1 of the VCS Standard. Additionally, section 3.19 of the VCS Standard notes that project and its context shall be described in the project description using the VCS Project Description template (or approved GHG program description template where the project is requesting registration under an approved GHG program).

Findings from Review on 13 JANUARY 2012			
The project make use of the updated version of the VCS Project Description template (VCS Version 3) and the information requested by section 3.19 of the VCS Standard, excepted 3.19.1 sub item 2 regarding the title and reference of the methodology applied to the project, including the version number.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 01/12**		

2.2 VCS Standard Section 3.8.2 and VCS AFOLU Requirements Section 3.2.1: Project start date

Project shall include a project start date in conformance with section 3.8.2 of the VCS Standard, where specific requirements for AFOLU projects are outlined. As set out in the *VCS Standard*, the project start date of an AFOLU project shall be the date on which activities that lead to the generation of GHG emission reductions or removals are implemented. Such activities may include preparing land for seeding, planting, changing agricultural or forestry practices, or implementing management or protection plans.

Findings from Review on 13 JANUARY 2012
In section 1.1 of the PD v.1.1 it is stated that "*Project start date: April 13, 2009 (Date on which first money transfer was made to K2C consultancy and the participants started to work on the project development.)*". This document (Doc.# 12) was provided to

the audit team during the field audit and can be consider as the start point of the project implementing management, since it formalized the beginner of the project as pointed in the Memorando de Entendimentos (Doc.#14). This document was found to be sufficient evidence demonstrating the start of project activities. In section 1.1 of the PD v.1.1 it is stated that the project crediting period is 30 years and the project crediting period is equal to the project lifetime (Section 1.7).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

2.3 VCS Standard Section 3.9 and VCS AFOLU Requirements Section 3.3: Project crediting period

Project shall include a project crediting period in conformance with section 3.9 of the VCS Standard. In general, for all AFOLU projects (ALM projects are an exception to this requirement) a crediting period of 20-100 years shall be used. Project crediting periods shall be equal to the project lifetime. The earliest project crediting period start date for AFOLU projects shall be 1 January 2002. Renewal of project crediting period shall follow requirements outlined in section 3.9.1 of the VCS Standard.

The project crediting period rules are set out in the *VCS Standard*. Projects shall have a credible and robust plan for managing and implementing the project over the project crediting period. For ARR or IFM extension of rotation age or low-productive to high-productive projects with harvesting, the length of the project crediting period shall be set to include at least one complete harvest/cutting cycle. In the case of selectively cut IFM projects, where trees are individually selected for harvest, the harvest/cutting cycle is the allowable re-entry period into the harvest area as determined by legal and regulatory requirements, and common practice.

Findings from Review on 13 JANUARY 2012			
In section 1.1 of the PD v.1.1 it is stated that the project crediting period is 30 years and the project crediting period is equal to the project lifetime (Section 1.7).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

2.4 VCS Standard Section 3.11 and VCS AFOLU Requirements Section 3.4: Project location

Project location shall follow requirements outlined in section 3.11 of the VCS Standard and 3.4 of the VCS AFOLU Requirements. Project location for AFOLU projects shall be specified using geodetic polygons to delineate the geographic area of each AFOLU project activity and provided in a KML file.

Findings from Review on 13 JANUARY 2012			
The Project proponent provided to the audit team all the KML files (Doc.#17). During the field audit the auditors confirmed the coordinates in the field by GPS.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

2.5 VCS Standard Section 3.12.1: Proof of title

Project description shall be accompanied by proof of title as outlined in section 3.12.1 of the VCS Standard.

Findings from Review on 13 JANUARY 2012			
In section 1.12.1 of the PD v.1.1 is provide all the documents that proof that the project proponent is the owner of the project area. During the field audit, all the original documents requested were made available to the audit team (Docs.#3; 18; 19; 20; 21; 22). Further evidenced was documented by FUNUI (Doc.18) witch certified that Rio Pardo Indigenous Territory is 27.200 metros far away from the FSM propriety. Review of these documents confirmed clear proof of titles over the project area.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

2.6 VCS AFOLU Requirements Section 4.2: Eligible AFOLU project type

The project is an eligible AFOLU project type, as per the guidance set out in the VCS AFOLU Requirements Section 4.2. Note project types can be combined as outlined in 4.2.12.3 of the AFOLU Requirements.
The relevant carbon pools for AFOLU project categories are aboveground tree biomass (or aboveground woody biomass in ARR and ALM projects), aboveground non-tree biomass (aboveground non-woody biomass in ARR and ALM projects), belowground biomass, litter, dead wood, soil (including peat) and wood products. Methodologies shall include the relevant carbon pools set out in Table 2 of Section 4.3.1 of the VCS AFOLU Requirements.

The VCS AFOLU Requirements contain project type specific requirements for all AFOLU project types, the following criteria shall be me for each project type:

- ARR: VCS AFOLU Requirement 4.3.7
- ALM: VCS AFOLU Requirements 4.3.8 – 4.3.11

- IFM: VCS AFOLU Requirements 4.3.12 – 4.3.15
- REDD: VCS AFOLU Requirements 4.3.16 – 4.3.17
- PRC: VCS AFOLU Requirements 4.3.18 – 4.3.20

Findings from Review on 13 JANUARY 2012			
The proposed project is classified as Reducing Emissions from Deforestation and Degradation (REDD) and has as goal stopping deforestation and degraded at the project frontier. Based under documents review (Doc. 32/33) and field visit, the audit team has found that the project meets VCS AFOLU requirement as a REDD project. In Section 2.3 of the PDD v1.1, points the carbon pools included: aboveground biomass, belowground biomass and permanent wood products, witch meet the VCS AFOLU requirements.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

2.7 VCS Standard Section 3.13: Project boundary

The project boundary shall be described (using diagrams, as required) and GHG sources, sinks and reservoirs shall be identified and assessed in accordance with the methodology applied to the project. The project shall justify not selecting any relevant GHG source, sink and reservoirs.

Findings from Review on 13 JANUARY 2012			
In section 1.9 of the PD v.1.1 shows the Project boundary coordinates (meters; SAD69). Spatial maps of the project area were elaborated using Landsat (30x30 m resolution). During the field audit the project boundaries was confirmed by GPS unit. In the table on page 67 is described the GHG source selected to be considered by the project.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

2.8 VCS AFOLU Requirements Sections 3.1.6 and 3.1.10: Project activities on peatlands

Where ARR, ALM, IFM or REDD project activities take place on peatland, the project shall adhere to both the respective project category requirements and the PRC requirements, unless the expected emissions from the soil organic carbon pool or change in the soil organic carbon pool in the project scenario is deemed below *de minimis* as set out in Section 4.3.3, in which case the project shall not be subject to the PRC requirements.

Findings from Review on 13 JANUARY 2012			
During the field audit the project area was visited by the audit team and confirmed that the project activity is not on peatlands.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not applicable.		

2.9 VCS AFOLU Requirements Section 4.3.3 and 4.3.4: De minimis carbon pools and conservative exclusion of carbon pools

Specific carbon pools and GHG sources, including carbon pools and GHG sources that cause project and leakage emissions, may be deemed *de minimis* and do not have to be accounted for if together the omitted decrease in carbon stocks (in carbon pools) or increase in GHG emissions (from GHG sources) amounts to less than five percent of the total GHG benefit generated by the project. Additional information on *de minimis* carbon pools is available in section 4.3.3 of the AFOLU Requirements.

Specific carbon pools and GHG sources do not have to be accounted for if their exclusion leads to conservative estimates of the total GHG emission reductions or removals generated. The conservative omission of specific carbon pools should be outlined within the methodology, and outline process for determining the exclusion of pools shall be followed (see VCS AFOLU Requirements Section 4.3.4).

Findings from Review on 13 JANUARY 2012			
Section 2.3 of the PDD v1.1 explains that the carbon pools involved in the carbon quantifications and justified the reason of not including soil organic carbon and litter pools. The audit team found this explanation appropriate.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

2.10 VCS AFOLU Requirements Section 4.3.5 and 4.3.6: Non-CO_2 GHGs

Reductions of N_2O and/or CH_4 emissions are eligible for crediting if in the baseline scenario the project area would have been subject to livestock grazing, rice cultivation, burning and/or nitrogen fertilization. Reductions of CH_4 emissions are eligible for crediting if fire would have been used to clear the land in the baseline scenario.

Findings from Review on 13 JANUARY 2012
In section 2.3 of the PD v.1.1 shows that the project included in the baseline scenario the emission of CH_4 and N_2O due the

biomass burning. This inclusion is in accordance to the methodology (Module E-BB).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

3 Application of Methodology

3.1 VCS Standard Section 3.1: Use of approved methodology

Projects shall apply methodologies eligible under the VCS Program. Methodologies shall be applied in full, including the full application of any tools or modules referred to by a methodology.

Findings from Review on 13 JANUARY 2012

Section 2 of the PD v.1.1 presents the information related to the application of the VCS approved methodology REDD Methodology Modules (REDD-MF), v1.0, VM0007.

The following modules were used by the project proponents (see Section 2 of the PD v.1.1):

- CP-AB “Estimation of carbon stocks in the above- and below-ground biomass in live trees and non-tree pools”;
- CP-W “Estimation of carbon stocks in the long-term wood products pool”;
- BL-UP “Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation";
- LK-ASU “Estimation of emissions from activity shifting for avoided unplanned deforestation";
- LK-ME “Estimation of emissions from market effects”;
- E-BB “Estimation of greenhouse gas emissions from biomass burning”;
- X-STR “Methods for stratification of the project area”;
- X-UNC “Estimation of uncertainty for REDD project activities".

The M-MON "Methods for monitoring of greenhouse gas emissions and removals" v.1.0, was also used, as stated in Section 4.3, to monitor changes in land cover due to deforestation, forest degradation and carbon stock enhancement. However, following review of the planned project activities which include active forest management activities, the audit team found that version 1.0 of M-MON does not accurately address carbon stock removals/losses from forest management activities. During the period in which the audit team was writing the draft report, version 2.0 of M-MON was released by the VCSA. This version of M-MON includes a specific process for the calculation of carbon stock losses from forest management activities which the version 1.0 of M-MON (currently applied by the project) did not include. During the field audit, the audit team concerns with the use of the proposed methodology to accurately account for forest management activities were discussed with the project proponents, and the project proponents argued that the established sampling design will account for losses in carbon stocks. Further, ex ante projections include removals from forest management activities. However, the inventory design currently employed by the project proponent includes a sampling protocol based on the existing road network within the project area (transects all start from existing logging roads). This sampling design is appropriate for measuring forest strata carbon stocks, but it is not appropriate for accurately tracking carbon stock loses from forest management activities. For example, the current inventory design will not account for carbon stock loses from the construction of new roads (noting an access road running from west to east in the southern section of the project area is already planned). As such, it is not clear how the project can accurately account for carbon stock loses from forest management activities using version 1.0 of M-MON. Recognizing this, the audit team has concluded that given the planned forest management activities within the project area, the project must utilize the most current version of M-MON to account for carbon stock loses from planned forest management activities.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 02/12**		

3.2 VCS Standard Section 3.5: Methodology deviations

Deviations from the methodology applied to the project are permitted where they represent a deviation from the criteria and procedures relating to monitoring or measurement (but not quantification) of GHG emission reductions or removals set out in the methodology. Deviations relating to any other part of the methodology shall not be permitted. Methodology deviations shall not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

Methodology deviations shall be permitted at validation or verification and their consequences shall be reported in the validation or verification report, as applicable and all subsequent verification reports. Methodology deviations are not considered to be precedent setting.

Findings from Review on 13 JANUARY 2012

Section 2.6 of the PD v.1.1 states that in the analysis of leakage outside the leakage belt, for calculating $PROP_{IMM}$ (methodological step), the participatory rural appraisal (PRA) approach was replaced by local data available from IBGE. This practice is justified by the fact that the IBGE has a precise approach for accounting population locally, which allows calculating the number of immigrants for a given period of time in the municipality of Colniza. This deviation is found by the audit team to fall under measurement and as such is an acceptable deviation. During field audit, the audit team found that a given value used to represent the local population in 2004 was not from a reliable source (see worksheet "LEAKAGE OUTSIDE" of the spreadsheet titled "REDD_ESTIMATES_27_09_2011.xls"). As such the proposed methodology deviation was not found to be appropriate given the non-reliable data source applied. One additional deviation from the methodology measurement was identified during the field audit. In the calculation of the parameter TOTFOR in leakage calculations, the total forest within the amazon forest biome within brazil was used rather than the total forest within the entire country (as required by the methodology). This deviation was found to be appropriate by the audit team.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 03/12**		

3.3 VCS Standard Section 4.2: Methodology revisions

Methodology revisions are appropriate where a project activity is broadly similar to the project activities eligible under an existing methodology and such project activity can be included through reasonable changes to that methodology. Methodology revisions are also appropriate where an existing methodology can be materially improved. Materially improving a methodology involves comparing the existing and proposed methodologies so as to show that the changes will deliver material improvements that will result in greater accuracy of measurement of GHG emissions reductions or removals, improved conservatism and/or reduced transaction costs.
Additional information on methodology revisions is available in the VCS Methodology Approval Process document.

Findings from Review on 13 JANUARY 2012			
No methodology revisions was required by the project proponents.			
Conformance	Yes ☐	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

3.4 Conformance with methodology applicability conditions

The project shall demonstrate conformance with all methodology applicability conditions. A project cannot use a methodology unless it meets all applicability conditions. Any change in applicability conditions is considered a Methodology Revision and must be submitted for double approval under the VCS Methodology Approval Process.

Findings from 13 JANUARY 2012	
Section 2.2 of the PD v.1.1 justify the applicability of each module from the VCS approved methodology REDD Methodology Modules (REDD-MF), v1.0, VM0007, used for the project calculations.	
Applicability Condition	**Finding**
BL-UP Module	
This module is mandatory for the unplanned deforestation category and it is applied to the project activity because the baseline agents of deforestation who clear the land for settlements, crop production (agriculturalist) or ranching, where such clearing for crop production or ranching does not amount to large scale industrial agriculture activities, and have no legal right to deforest the land for these purposes; and are either resident in the region or immigrants.	Findings gathered by the audit team support that the baseline agents of deforestation imply in unplanned deforestation in project area, hence the project meets the applicability conditions for the BL-UP module. During field audit, the audit team reviewed some police reports regarding land invasions, located some fire points nearby the project area by airplane and assessed the land use activities nearby the project area. Settlements and small farms located around the project area represents the major deforestation pressure, based on the conversion from forests to coffee plantation or grazing activities, as livelihood activities for the local population. Nevertheless, as stated in the footnote 2 of BL-UP, project proponent shall justify the definition of small-scale/large-scale deforestation drivers. **NCR 04/12**
CP-AB Module	

This module is applicable to all forest types and age classes. Inclusion of the aboveground tree biomass pool as part of the project boundary is mandatory as per the framework module REDD-MF.	As required by VM0007, the project meets the applicability of this module..
CP-W Module	
This module is applicable to all cases where wood is harvested for conversion to wood products for commercial markets, for all forest types and age classes. This module is applicable in the baseline, as the wood products pool is included in the project and in accordance with the applicability criteria in the framework module REDD-MF, where: • Timber harvest occurs prior to or in the process of deforestation and timber is destined for commercial markets; The wood products pool is determined to be significant (using T-SIG).	Audit team verified during the field audit that timber harvest occurs in the process of deforestation and timber is destined for commercial markets. As applicable by the VM0007, the wood products pool was included in the project (see Sections 2.3, 2.4 and 3.1 of the PD v.1.1).
E-BB Module	
Where fires occur ex post in areas that coincide with areas deforested or degraded in the baseline case, the module shall be used to account for greenhouse gas emissions.	Audit team verified that fires are very frequent in the project region as part of site preparation activities following deforestation; hence E-BB module is applicable under the project conditions (see Section 1.10 of the PD v.1.1).
LK-ASU Module	
This Module is applicable for estimating carbon stock changes and greenhouse gas emissions related to the displacement of activities that cause deforestation of lands outside the Project Area due to the avoided unplanned deforestation in the Project Area.	Findings gathered by the audit team support that the baseline agents of deforestation are applicable in unplanned deforestation in project area, hence displacement of activities due to the implementation of the project activity shall be addressed using the LK-ASU module.
LK-ME Module	
The module is mandatory where the process of deforestation involves timber harvesting for commercial markets.	Audit team verified that the process of deforestation within the project area involves timber harvesting for commercial markets (see Sections 1.10 and 2.4 of the PD v.1.1). As such the use of this module is appropriate.
X-STR Module	
This module provides guidance on stratifying the project area into discrete, relatively homogeneous units to improve accuracy and precision of carbon stock and carbon stock change estimates. Any module referencing strata i shall be used in combination with this module.	Audit team verified that the project area was stratified into four strata, in accordance with the X-STR module.
X-UNX Module	
The module is mandatory. It is applicable for estimating the uncertainty of estimates of emissions and removals of CO_2-e generated from REDD project activities.	According to VM0007 this module is mandatory and therefore was used for the project.

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	**NCR 04/12** (also see **NCR 02/12**, issued above, is directly related to this criteria of the report).		

4 Additionality and baseline selection

4.1 VCS Standard Section 3.15: Additionality

Additionality shall be demonstrated and assessed in accordance with the requirements set out in the methodology applied to the project.

Findings from Review on 13 JANUARY 2012
T-ADD “Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU)

Project Activities" was used to demonstrate project additionality (see Section 2.2 of the PD v.1.1). The steps established by T-ADD are presented in Section 2.5 of the PD.

Four baseline scenarios were identified for the projects area (see Section 2.4 of the PD). The selected, Scenario 3, represents unplanned deforestation caused by uncontrolled invasions for wood logging and implementation of business as usual (BAU) activities.

As described in item "1.10 Conditions Prior to Project Initiation" of the PD, coffee crops represent about 10% of land use in BAU, while pasture accounts for virtually all the remaining land occupation. The implementation of these BAU activities is usually financed by means of initial capital obtained by logging.

In accordance with T-ADD, the project additionality was assessed through financial analysis, based on a literature survey on cash flows and financial indexes of BAU local activities, as well as local data on FSM economic activities. A barrier analysis was also conducted.

The audit team reviewed the spreadsheet titled "AVALIACAO_DA_MADEIRA__MAIS_REDD-AUDITORIA_REV1 setape c protecao.xls", where the IRR was calculated for project activity in the scenarios with and without the financial incentives from the REDD project with FSM staff responsible for financial projections. During the review of worksheets used as evidence to support the barrier analysis, the audit team found that no sensitivity analysis regarding the results from Sub-step 2b of T-ADD was conducted. This is a required step with T-ADD, as required by an Sub-step 2d. As such the project has not fully demonstrated conformance with all steps of T-ADD. **NCR 05/12**

The assignment and release of buffer credits at subsequent verification events was not estimated properly. During the field audit the planned release of buffer credits was reviewed by the audit team (as included within financial projections). The planned release was found to be calculated incorrectly, and following the field audit, the audit team further clarified to the project proponents that the re-distribution of 15% of the total credits in the buffer pool are returned to the project at each verification. This is further explained in the VCS registration documents available on the VCS website. As the amount of returned credits is included within financial projections and impacts the project cash flow calculations and IRR analysis, this error was identified as a nonconformance. **NCR 06/12**

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 05/12** **NCR 06/12**		

4.2 VCS AFOLU Requirements Section 4.5: Project conformance with methodology baseline selection

VCS AFOLU Requirements Section 4.5 includes project type specific guidance for the minimum baseline selection requirements for AFOLU project types. All approved methodologies shall be in conformance with these criteria, and projects must conform to the methodological approach for the baseline selection.

Findings from Review on 13 JANUARY 2012

Section 2.3 of the PD v.1.1 states about the GHG and carbon pools selected for the project. The following notes are related to the project conformance with methodology baseline selection though the application of T-ADD.

Baseline Determination Step	Findings
STEP 1 Identification of alternative land use scenarios to the AFOLU project activity of the T-ADD.	For the selection of the most reasonable baseline scenario for the project, four baseline scenarios were evaluated: • Scenario 1: deforestation and logging of the area permitted by law (i.e. are excluded from the Legal Reserve), to generate supplementary incomes to financially support a long-term vigilance system; • Scenario 2: adoption of common land-use practices in the region (business as usual), including deforestation beyond limits established by Brazilian Forest Code (generalized non-compliance typically observed in the project region); • Scenario 3: unplanned deforestation caused by uncontrolled invasions for wood logging and implementation of business as usual activities; • Scenario 4: farm sale to private investors and

	subsequent deforestation for cattle ranching/coffee production as per common practice within the region. As stated in Section 2.4 of the PD, and based on the findings gathered from the field audit, the audit team agrees that Scenario 3 is most reasonable baseline scenario in case of absence of the REDD Project.
STEP 2. Investment analysis to determine that the proposed project activity is not the most economically or financially attractive of the identified land use scenarios; or STEP 3. Barriers analysis of the T-ADD.	In accordance with T-ADD, the project additionality was assessed through financial analysis and a barrier analysis was also conducted (see Item 4.1 of this report and Section 2.5 of the PD v.1.1). A barrier analysis was also presented in the PD.
STEP 4. Common practice analysis of the T-ADD.	According to T-ADD, the previous steps shall be complemented with an analysis of the extent to which similar activities have already diffused in the geographical area of the proposed VCS AFOLU project activity. This test is a credibility check to demonstrate additionality that complements the barrier analysis (Step 3) and the investment analysis (Step 2). Even though this information can be extracted from the PD, from different sections, there is no specific one summarizing the common practice analysis. **OBS 02/12**
PART 1. Definition of boundaries of the BL-UP module. The analytical domain from which information on the historical deforestation rate is extracted and projected into the future must be delineated by spatial and temporal boundaries.	The physical boundaries of the project are shown in Figure 21 of the PD. The areas were selected based on the similarity with the project arena, as required by VM0007 (BL-UP, Part 1): • Politics and Legislation: the areas are located in the same Municipality (Colniza-MT), politics and legislation regarding environment and land property are identical. Moreover, the agencies of regulation, command and control referent to Brazilian Forest Code are the same throughout the State. Thus, the same difficulties to enforce the forest legislation in the Reference Area would apply to the Project Area and the leakage belt. • Soil and landscape: similarity between Project Area and Reference Area can be observed by means of satellite images and thematic maps from the region (see Figure 19 of the PD). These soil characteristics are suitable for implementation of the main BAU activities (i.e. coffee cultivation and pasture) in both Reference Area and Project Area. According to the analysis presented in Figure 20, the Project Area, Reference Area and Leakage Belt pass the test of similarity for landscape, as their slope classes occur under similar frequencies. • According to Table 6 of the PD, the Project Area, Reference Area and Leakage Belt are also similar regarding the density of hydrologic drainage elements. During the field audit, the audit team confirmed similarity within the RRD and project area through direct observations while flying over the RRD when traveling to the project area and also through driving within the RRD. The temporal boundaries of the project regarding start date, end date and the project crediting period are presented in Sections 1.5 to 1.7 of the PD. The historical reference period is

	presented in Section 3.1 of the PD (see Figure 17), while Section 4.3 states that the baseline will be reassessed every 10 years, in accordance with the methodology.
PART 2. Estimation of annual areas of unplanned deforestation of the BL-UP module.	For estimation of annual areas of unplanned deforestation (p. 88 of the PD), required by VM0007 (BL-UP, Part 2), future deforestation is assumed to happen first at the pixel with the highest deforestation risk values. According to the company responsible for the imagery interpretation of the project area, the imagery used for the analysis presented 0% of cloud covering, 30 m² resolution and pixel classification with 99% accuracy. Project proponents are supposed to provide the audit team with the classification methodology used, however no additional evidence has been provided to the audit team at the time of the issuance of the Draft Validation Report. Further, accuracy reports must be presented in order to prove that the imagery used is in accordance with BL-UP section 2.1.4. (**NCR 07/12**) In the Deforestation Risk Map, the pixels with the highest risk values were successively selected whose area is equal to the area expected to be deforested in a given project year, proportionally for a given stratum occurring in the Project Area. Pixel selection procedure was repeated for each successive project year. All yearly baseline deforestation areas were compiled in one single table, showing the expected baseline deforestation for the project lifetime (see Table 7 of the PD). This procedure was repeated for each forest stratum in the project area. Audit team have verified that the assumptions taken by the project proponents in order to develop the Deforestation Risk Map are in accordance with the methodology VM0007. Nevertheless, this map cannot replace the map with the location of future deforestation, as defined in Step 3.4 of the BL-UP module for the calculation of carbon stock changes in the baseline. See findings below specific to the methodological requirements for location analysis model validation.
PART 3. Location and quantification of threat of unplanned deforestation. All the analysis in this part of the module is performed on the reference region for location of deforestation (RRL).	Part 3 of BL-UP module specify how the location and quantification of threat of unplanned deforestation shall be assessed. The map presented in Figure 16 of the PD, represents the deforestation risk map obtained for the FSM Project Area, nevertheless, the PD does not present a map with the location of future deforestation (BL-UP, Step 3.4). The audit team confirmed that, during the development of the deforestation risk map, Step 3.3 of BL-UP module, regarding model calibration and confirmation, was not followed. Further, the information regarding the map with the location of future deforestation was not prepared for the project area (BL-UP, Step 3.4). Step 3.3 of BL_UP requires model calibration and confirmation of the risk maps, and the results of this calibration and confirmation are then used to select the most appropriate map. As this has not been completed, it is not clear whether or

		not the most appropriate risk map has been selected, and the actual map used to project likely deforested areas cannot be evaluated by the audit team. **NCR 07/12**	
PART 4. Estimation of carbon stock changes and greenhouse gas emissions		Part 4 of BL-UP module is directly affected by the results from Part 3, hence it must be revised in accordance with the new results from the correction of **NCR 07/12**above.	
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 07/12** **OBS 02/12**		

4.3 VCS Standard Section 3.14: Baseline scenario selection

The baseline scenario for the project shall be determined in accordance with the requirements set out in the methodology applied to the project, and the choice of baseline scenario shall be justified.

Equivalence in type and level of activity of products or services provided by the project and the baseline scenario shall be demonstrated and, where appropriate, any significant differences between the project and the baseline scenario shall be explained.

In developing the baseline scenario, assumptions, values and procedures shall be selected that help ensure that net GHG emission reductions and removals are not overestimated.

Findings from Review on 13 JANUARY 2012			
As stated in Section 2.4 of the PD and the findings mentioned above, the audit team agrees that the selected scenario (Scenario 3) is most reasonable baseline scenario in case of absence of the REDD Project. Regarding baseline GHG emission reductions and removals, it shall be reassessed in accordance with **NCR 06/12**, issued above.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	See **NCR 07/12**		

4.4 VCS AFOLU Requirements Section 3.1.9: Baseline reassessment

For all IFM, REDD and PRC project types, the project proponent shall, for the duration of the project, reassess the baseline every 10 years and have this validated at the same time as the subsequent verification. Baseline projections for deforestation and/or degradation, forest management plans, and peatland drainage beyond a 10 year period are not likely to be realistic because rates of change in land-use and/or land management practices are subject to many factors that are difficult to predict over the long term, hence the need for periodic reassessment of the baseline. This reassessment will capture changes in the drivers and/or behavior of agents that cause the change in land use and/or land management practices and changes in carbon stocks, all of which shall then be incorporated into revised estimates of the rates and patterns of land-use change and estimates of baseline emissions.[2] Ex-ante baseline projections beyond a 10 year period are not required.

Findings from Review on 13 JANUARY 2012			
As stated in Section 4.1 of the PD v.1.1, Description of the Monitoring Plan, the baseline shall be reassessed every 10 years, in accordance with the methodology and the VCS AFOLU Requirements. The baseline scenario will be monitored through an assessment of the driver variables and assumptions assessed through the use of LANDSAT 5 imagery of the project area and leakage belt. These parameters will be re-validated after each baseline renewal, based on the calculation of the verified ex post baseline deforestation (in hectares) of the past 10 year period, in comparison with other location not affected by the project activities. If deforestation is verified as 10% lower of 10% higher than originally predicted, the carbon baseline shall be re-adjusted using the observed values of the driver variables.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

5 Quantification of GHG emissions

5.1 VCS Standard Section 3.16: Quantification of GHG emission reductions and removals

GHG emissions and/or removals shall be estimated for each GHG source, sink and/or reservoir relevant for the project (including leakage) and the baseline scenario.

Findings from Review on 13 JANUARY 2012
Emissions are calculated for aboveground biomass, belowground biomass, and harvested wood products. GHG emissions from

baseline, project scenarios, as well as emissions from leakage are calculated in the excel spreadsheet titled "REDD_Estimates_27_09_2011". See section 6 below for findings relevant to leakage calculations.

Section 2.3 of the PD describes the SSRs included within GHG calculations. Following the guidance of VM0007, the project calculates GHG emissions associated with aboveground and belowground biomass, and harvested wood products. The project does not include carbon stocks in dead wood pools, nor does the PD include a justification as to why this pool is excluded. Audit team field visit to the reference region for deforestation calculations confirmed that in the deforested baseline scenario this carbon pool is likely to be much less than the project scenario. However, VM0007 states in the Guidance Manual for VM0007 p.10 that the tool T-SIG shall be used to justify the omission of carbon pools and emission sources. No evidence of the use of this tool for the calculation of the significance of dead wood carbon pools was provided to the audit team during the audit. As such, the Project Proponent has not provided clear evidence to justify the exclusion of carbon stocks in the dead wood pool. (**NCR 08/12**)

Additional nonconformances related to the quantification of GHG emission reductions are noted in the findings below.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 08/12**		

5.2 The correctness and transparency of formulas and factors used

Findings from Review on 13 JANUARY 2012

Equations used for the calculation of carbon stocks are presented in the spreadsheet titled "REDD_Estimates_27_09_2011". This spreadsheet includes all calculations of baseline scenario carbon stocks and emissions, project scenario emissions, baseline deforestation area calculations, leakage calculations, and total VCU calculations. Field inventory data used to derive carbon stock estimates is recorded in 18 spreadsheets (one per each transect), in the folder titled "Transectos". Field inventory data is used to calculate total tons biomass per each measure tree using the Francon Equation and then applying carbon density (note the same equation and density was used for all trees, however a different equation was used for palm trees with the same carbon density applied (for example see cell L23 in spreadsheet titled "dados_transectos_15_101027" worksheet "Plan 1").

During the field audit, the audit team reviewed all carbon calculations with PLANT staff responsible for calculations. The audit team traced inventory data through carbon calculations and found that the calculations were correct. In general the spreadsheet transparently presented GHG calculations, however multiple errors in data inputs (see 5.3 below) were noted.

The PD states on p.92 that merchantable biomass was multiplied by a BCEF for conversion of merchantable volume to total aboveground tree biomass equal to 1.66. In the transect data sheets, carbon stocks are calculated using a form factor to calculate merchantable volume (see column K in transect datasheets), and then converted to tons biomass using a density of 0.590. Merchantable biomass is then converted to carbon using a carbon fraction of 0.48. As such it is not clear how the PD reflects the actual calculations used to derive carbon stocks. The merchantable biomass is then converted to aboveground biomass using the BCEF in Doc. #24 (see cell G5 in worksheet "PA A_B Carbon Pools").

Carbon stocks calculated from the field inventory apply the Francon Factor, a volumetric equation sourced from the Brazilian government. During the field audit the audit team discussed the appropriateness of the Francon Factor as an allometric equation, and it was decided that the equation could be used as an allometric equation given that all requirements related to the use of allometric equations within the methodology were met. Interviews with PLANT staff confirmed that the Francon Equation had not been validated as required by CP-AB (see p.12-13). As no validation of the Francon Equation specific to the project area has been conducted, it is not clear how this equation qualifies as an appropriate allometric equation. (**NCR 08/12**)

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 09/12**		

5.3 Calculation of emissions in the baseline scenario (ex-ante estimate)

Findings from Review on 13 JANUARY 2012

During the field audit, the audit team reviewed all GHG calculations with PLANT staff responsible for GHG calculations. Additionally, the audit interviewed FSM staff responsible for conducting the field inventory as well as staff from Geomapas responsible for remote sensing analysis (see section 4.2 above for findings related to historic and projected deforestation analysis). Below is a review of the findings from the interviews in relation to the emission calculations from the baseline scenario.

Calculation of carbon stocks:

During the field audit, field inventory sampling used as the initial input to derive project area and RRD carbon stocks, were evaluated by the audit team. In total, 5 sub-plots were re-measured by the audit team. Re-measurement of the sub-plots identified numerous issues that impact the accuracy associated with the carbon stock estimates used to calculate project GHG emissions. For example, the following issue was identified (see section 8 for additional findings related to field inventory): Failure to follow field inventory SOPs: interviews with inventory crew members confirmed that height was not measured using a clinometer as noted in the SOPs. Rather height was estimate using ocular estimates from the base of the tree looking directly up the stem. During the field audit, the audit team used a laser range finder to compare ocular estimates with to measured heights. In total 30 trees were measured and independent height estimates from field crew members were recorded for each of the 30 trees. Variation between inventory crew members was noted, however when averaged, a significant difference was not found when compared using a Paired t-Test for Two Sample Means (note data was not randomly distributed). This finding showed that the 3 field crew members had strong estimations of height in the field, however, when field re-inventory of sub-plots was compared to original inventory plot data collected to derive strata carbon stock estimates, significant differences between the height, measured circumference, and actual number of trees measured within the plots was noted. Further, the project proponent did not provide the audit team with an estimate of uncertainty in field measurements, but rather argued that conservative approaches were used and as such uncertainty did not need to be calculated. However, comparison of re-inventory of sub-plots during the field audit revealed substantial differences between the field inventory and the audit team re-inventory. As such it is not clear how the carbon stock estimates for the project area can be considered accurate. Below is a comparison of summary statistics of the re-inventoried sub-plots (note that plots were re-measured by both the FSM field crew with FSM field crew recorder, and also by the FSM field crew with Rainforest Alliance data recorder with additional cross check verifications of both circumference and height measurements). The tables below demonstrate that the original FSM inventory differed from that of the re-inventory, and further field data recording within the re-measurement of plots differed between the audit team and the FSM field crew. These errors combined with data transfer errors from field books to spreadsheets (see findings below regarding errors in field inventory transcription errors), make it impossible for the audit team to validate the current FSM inventory. Prior to validation, FSM must provide additional evidence to support field inventory currently used in carbon stock estimates. (**NCR 10/12**)

Transecto 2 - P12 sub P1				
Summary	Total Trees	Average CAP	Average Height	Total Palmeira
Original FSM Inventory	84.0	48.5	5.1	22.0
RA Inventory	64.0	49.8	8.3	13.0
FSM Re-inventory	64.0	49.1	6.8	13.0

Transecto 5 - P45 Sub 1				
Summary	Total Trees	Average CAP	Average Height	Total Palmeira
Original FSM Inventory	81.0	40.4	8.0	16.0
RA Inventory	73.0	47.3	7.3	16.0
FSM Re-inventory	72.0	48.1	6.5	14.0

Transecto 5 - P42 - Sub 5				
Summary	Total Trees	Average CAP	Average Height	Total Palmeira
Original FSM Inventory	66.0	47.0	7.2	5.0
RA Inventory	65.0	38.0	5.0	6.0
FSM Re-inventory	66.0	37.7	4.7	6.0

Transecto 10 - P91 sub P1				
Summary	Total Trees	Average CAP	Average Height	Total Palmeira
Original FSM Inventory	54.0	40.2	6.9	4.0
RA Inventory	47.0	37.7	6.3	3.0
FSM Re-inventory	49.0	42.4	6.3	1.0

Transecto 10 P92 sub 1				
Summary	Total Trees	Average CAP	Average Height	Total Palmeira
Original FSM Inventory	67.0	39.0	7.0	7.0
RA Inventory	62.0	38.6	7.0	6.0
FSM Re-inventory	63.0	38.3	6.9	6.0

Calculation of historic deforestation rate:

The project uses BL-UP version 1.0 of VM0007 to calculate the historic deforestation rate. In September of 2011, version 2.0 of BL-UP was released, however, as the project does not utilize the population driver approach to BL-UP, the use of Version 1 is appropriate. Section 3 above includes findings relevant to the application of BL-UP, however the following findings are specific to the calculations resulting from the application of BL-UP. Following BL-UP the project employs the simple historic estimation of annual areas of unplanned deforestation over the historical reference period from 1999 to 2009. The following Landsat imagery (30m resolution) was used in calculations: 1999, 2001, 2004, 2007, and 2010. It should be noted that section 2.1.1 of BL-UP allows for the use of 30m medium resolution Landsat imagery, however for the first point in time must use high-resolution data (5m resolution) and/or include direct field observation for groundtruthing the medium resolution data. The project did not include high resolution imagery. The project did utilize a field inventory; however this field inventory did not include specific groundtruthing of spectral imagery classification of land use classes used in deforestation calculations. Further, the inventory was restricted to the project area, and did not include any areas designated as coffee production, cleared land, grazing areas, as such it is not clear how the forest inventory would qualify as a groundtruthing exercise to justify the use of medium resolution data in conformance with the data requirements of BL-UP. (**NCR 11/12**)

Landsat imagery from the historical reference period was used to calculate the deforestation rate within the area following the guidance of BL-UP. Accuracy of mapping (as specified in section 2.1.4 of BL-UP) could not be confirmed during the field audit, as all mapping was conducted by an external consultant. Following the field audit, the audit team interviewed the consultant who conducted the remote sensing analysis. The audit team requested the accuracy assessment report in order to assess conformance with section 2.1.4 of BL-UP, however at the time of writing the Draft Report the audit team has not received evidence of the accuracy assessment, as such the project has not demonstrated conformance with this requirement of BL-UP. (see findings in 4.2 above regarding historic deforestation calculation). (see **NCR 07/12**)

The historical average deforestation rate was used, as the linear regression calculated for the historical deforestation period was found to be insignificant.

As noted above, baseline carbon stock calculations were reviewed during the field audit with PLANT staff responsible for GHG calculations. Although not all equation inputs could be validated due to lack of clearly described assumptions (see 5.7 below), and strata carbon stock calculations could not be verified (see findings above), and issues related to the validation of deforestation risk (see findings in section 4.2 above), the use of module equations for actual calculations was reviewed by the audit team and found to be appropriate.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 07/12** **NCR 10/12** **NCR 11/12**		

5.4 Calculation of emissions reductions or avoided emissions due to the project (ex-ante estimate)

Findings from Review on 13 JANUARY 2012
As noted in 5.3 above, the audit team reviewed all GHG calculations with plant staff responsible for completed calculations. Project area ex ante estimates include projected areas to be degraded each year based on FSM forest management plan (see worksheet “PA DEFORESTATION RATE” in the GHG calculation spreadsheet (Doc. #24). In this worksheet, project exploited area per annum provided from FSM (anticipated area harvested per year) is multiplied by the expected extracted wood (m^3/ha) to calculate the total carbon stock removals per year. Assumptions supporting extracted wood volumes were explained to the audit team, and found to be appropriate. This worksheet calculates gross emissions from forest management activities, however it fails to account for emissions related to infrastructure development related to forest management activities (creation of new roads, skid trails, landing zones, etc.). As this data is used for ex ante projections and is based on the best available data, it is found to be appropriate, however, as noted in section 3.1 above, ex post calculations must account for all material carbon stock removals related to forest management activities.

Carbon stocks within the 4 strata of the project area are calculated using the forest inventory (see findings related to forest inventory issues above). Aboveground biomass is then calculated using a BCEF as described above. Belowground biomass is calculated using a root:shoot ratio which was verified during the field audit. Total aboveground and belowground biomass is then calculated by multiplying the per area stock by the individual stratum area. The calculations were found to be in conformance with CP-AB. Calculation of carbon stored in harvested wood products was reviewed during the field audit. The project used equations and default values as required as per CP-W. Specifically, in the worksheet titled "PA WOOD PROD CARBON POOL" in Doc #24, the required equations from CP-W are used. The use of these equations was reviewed by the audit team and found to be in conformance with CP-W requirements.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised, however see NCRs related to carbon stock inventory.		

5.5 Calculation of emissions from project activities (ex-ante estimate)

Findings from Review on 13 JANUARY 2012			
Emissions from project activities are considered to be insignificant and as such are excluded from ex ante projections.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

5.6 VCS AFOLU Requirements Sections 3.1.8 and 4.5.3: ARR and IFM Long-term average calculation

ARR or IFM projects with harvesting activities shall not be issued GHG credits above the long-term average GHG benefit maintained by the project. The long-term average GHG benefit shall be calculated as set out in Section 4.5.3 of the VCS AFOLU Requirements.

Findings from Review on 13 JANUARY 2012			
Within the project area harvesting is planned within the project scenario. All volume removed wil be tracked and counted as a loss in the project calculations. This was confirmed through interviews with FSM and PLANT staff during the field audit. This is further supported by the fact that Florestal Santa Maria S.A is in the process for FSC certification which requires strict control of wood volume removals involved in the forest management activities (logging area, infra-structure, wood products, timber's volume). LTA is not applicable for REDD projects, however note that harvesting is being accurately counted in ex ante estimates and should be confirmed in all future verifications.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not applicable		

5.7 The assumptions made for estimating GHG emission reductions

Findings from Review on 13 JANUARY 2012			
Multiple assumptions related to GHG calculations are not transparently described. Some assumptions are noted in the GHG calculation spreadsheet, however numerous assumptions were not noted. Below are examples of assumptions that are not clearly and transparently explained within the PD. • When evaluating the Leakage Belt deforestation factors and general forest characteristics (stratification, forest type, carbon stocks), the same parameters used for the project area are assumed to be equal in the leakage belt. • Deforestation within the project area is distributed across strata proportional to strata size, as such location within the project area is not considered when projecting planned forest management within the project scenario. • The same harvest volumes are assumed for all strata, hence wood product calculation across strata varies only as a function of strata size and merchantable volume. • In the leakage calculation of $PROP_{RES}$ is assumed that all non- $PROP_{RES}$ is residential. Whenever assumptions are used, the PD and/or supporting documents that are publically available must clearly explain assumptions used, in order to provide full transparency in accordance with VCS principles.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 12/12**		

5.8 VCS AFOLU Requirements Section 3.1.1: Data requirements

As set out in the *VCS Standard*, standards and factors used to derive GHG emissions data as well as any supporting data for establishing baseline scenarios and demonstrating additionality shall be publicly available and derived from a reputable and recognized

source, such as *IPCC 2006 Guidelines for National GHG Inventories or the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry*.

Findings from Review on 13 JANUARY 2012			
With the exception of the data source used in calculation of leakage (see findings and NCR related to section 3.2 above), all data sources reviewed by the audit team were found to be appropriate. During the review of GHG calculations, the audit team verified the correct use of literature values and default values. Only in the use of the population data for 2004 applied in the leakage calculations was an inappropriate data source identified. As this issue is addressed in 3.2 above, the project was found to be in conformance with this criterion.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised, however see section 3.2 above.		

6 Leakage

6.1 VCS AFOLU Requirements Section 3.5.1: Identification of leakage

The potential for leakage shall be identified, and projects are encouraged to include leakage management zones as part of the overall project design. Leakage management zones can minimize the displacement of land use activities to areas outside the project area by maintaining the production of goods and services, such as agricultural products, within areas under the control of the project proponent or by addressing the socio-economic factors that drive land use change.

Findings from Review on 13 JANUARY 2012			
Deforestation agents likely to cause leakage are identified in PD, and likely agents of deforestation were confirmed through field visit to RRD. Leakage belt was identified through similarity analysis discussed with PLANT Staff. The process for spatial analysis of remotely sense imagery was completed by a consultant hired by PLANT to complete deforestation projections and mapping of Leakage Belt. As noted above, assumptions between similarity of the project area and leakage belt are not clearly described within the PD (see section 5.7 above. Leakage Belt confirmed through review of remotely sensed imagery and Google Earth by audit team. Similarity analysis reviewed by team with PLANT Staff. Future verifications should consider directly visiting leakage belt to confirm implementation of Leakage belt monitoring and effectiveness of leakage mitigation activities.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

6.2 VCS AFOLU Requirements Section 3.5.2: Leakage mitigation

Activities to mitigate leakage and sustainably reduce deforestation and/or degradation are encouraged and may include the establishment of agricultural intensification practices, lengthened fallow periods, agroforestry and fast-growing woodlots on degraded land, forest under-story farming, ecotourism and other sustainable livelihood activities, and/or sustainable production of non-timber forest products. Leakage mitigation activities may be supplemented by providing economic opportunities for local communities that encourage forest protection, such as employment as protected-area guards, training in sustainable forest use or assisting communities in securing markets for sustainable forest products, such as rattan, vanilla, cacao, coffee and natural medicines.

Findings from Review on 13 JANUARY 2012			
Annex I of the PD v. 1.1 points some activities that the proposed project intends to implement to ensure that the forest management continues in FSM property and the leakage be mitigated. In interview during the field audit the project proponent confirmed their intention and justified each activity. Furthermore, all those activities covered in the Annex I is included in the project feasibility analyse (Doc.25).			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

6.3 VCS AFOLU Requirements Section 3.5.4, 4.6.4 and 4.6.15: Market leakage

Market leakage assessments shall occur at validation and verification. The rules and requirements for the assessment of market leakage are set out in Section 5 of VCS AFOLU Requirements. Projects shall account for market leakage where the production of a commodity (eg, timber) is significantly affected by the project. The significance of timber production is determined as set out in Section 4.3.3 above or as set out in Section 4.6.15 below.

Findings from Review on 13 JANUARY 2012
Section 3.3 of the PD v1.1 explains the calculation of market leakage. Market leakage is calculated in worksheet titled "LEAKAGE MARKET" within Doc. #24, which was reviewed with PLANT staff responsible for GHG calculations during the field audit. Review of the market leakage calculations found that the appropriate default values as required by LK-ME were applied in leakage calculations. Baseline harvest volumes were based on merchantable volume extractions from similar forest types as

identified by FSM and confirmed by the audit team. Merchantable volume within harvested wood was then input into LK-ME equations to derive market leakage emissions using calculated deforestation rates. Market leakage per stratum was then calculated on expected deforestation per year of the project lifetime. Review of these calculations found the project to be in conformance with the requirements of LK-ME.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised		

6.4 VCS AFOLU Requirements Section 4.6.2: *De minimis leakage*

Leakage that is determined, in accordance with Section 4.3.3, to be below *de minimis* (ie, insignificant) does not need to be included in the GHG emissions accounting. The significance of leakage may also be determined using the CDM A/R methodological tool *Tool for testing significance of GHG Emissions in A/R CDM Project Activities*.

Findings from Review on 13 JANUARY 2012			
Not applicable, leakage activities are quantified, and ex post leakage will be monitored.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not applicable		

6.5 VCS AFOLU Requirements Sections 4.6.8 – 4.6.21: Project type specific leakage requirements

The VCS AFOLU Requirements includes the following project type specific criteria (see VCS AFOLU Requirements for complete reference of criteria requirements):

- ARR: VCS AFOLU Requirements Sections 4.6.8 – 4.6.9
- ALM: VCS AFOLU Requirements Sections 4.6.10 – 4.6.12
- IFM: VCS AFOLU Requirements Sections 4.6.13 – 4.6.14
- REDD: VCS AFOLU Requirements Sections 4.6.15 – 4.6.16
- PRC: VCS AFOLU Requirements Sections 4.6.17 – 4.6.21

Findings from Review on 13 JANUARY 2012			
VCS AFOLU Requirements for AUDD are described in 4.6.15.2. This requirement states: *"AUDD: The potential for leakage shall be identified and the project shall address (and describe in the project description) the socio-economic factors that drive deforestation and/or degradation. Leakage shall be calculated by monitoring forested areas surrounding the project and other forested areas within the country susceptible to leakage from project activities."* Section 3.3 does not include a description of the socio-economic factors that drive deforestation and/or degradation as required by the VCS AFOLU Requirements. As such the project has not demonstrated full conformance with the VCS requirements for AUDD projects.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 13/12**		

6.6 VCS AFOLU Requirements Section 4.6.3: Quantification of leakage

GHG emissions from leakage may be determined either directly from monitoring, or indirectly when leakage is difficult to monitor directly but where scientific knowledge provides credible estimates of likely impacts. The GHG credit calculation table provided below in Section 4.7 includes an example of indirect leakage accounting.

Findings from Review on 13 JANUARY 2012			
Application of required activity shifting leakage and market leakage modules was reviewed by audit team with PLANT staff responsible for GHG calculations. As noted above, the audit team found the leakage calculations to be in conformance with the requirements of the modules. The project assumes leakage mitigation activities will be 90% effective. It is not clear how effective leakage mitigation activities will be in Leakage Belt communities, as such this high effectiveness rate does not seem conservative. As leakage will be monitored in the project scenario the project is in conformance with the methodology requirements, however the audit team does not consider the assumed 90% effectiveness to be conservative leakage calculation.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	**OBS 03/12**		

7 Net emission reductions and removals

7.1 VCS AFOLU Requirements Section 3.5.5: Accounting for leakage

Any leakage shall be subtracted from the number of GHG emission reductions and removals eligible to be issued as VCUs.

Findings from Review on 13 JANUARY 2012			
Leakage is correctly subtracted from gross project GHG emissions, and VCUs are estimated correctly in Doc. #24 (see worksheet "VCU"). It should be noted that the buffer credits returned to the project overtime were incorrectly calculated as noted in 4.1 above within the financial projections. The same issue is present in column "R" of the worksheet titled "VCU" in Doc. #24.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised, however see findings in section 4.1 above regarding the redistribution of credits from the buffer pool.		

7.2 Uncertainties assessment associated with the calculation of emissions

Findings from Review on 13 JANUARY 2012			
The PDD continually argues that the most conservative approach was always used in all aspects of project design and development, and as such uncertainty deductions are not required. The project refers to VMD0017 C-UNC which states: *"Where an uncertainty value is not known or cannot be simply calculated, then a project must justify that it is using an indisputably conservative number and an uncertainty of 0% may be used for this component."* The module goes on to state: "*Alternatively, (indisputably) conservative estimates can also be used instead of uncertainties, provided that they are based on verifiable literature sources or expert judgment. In this case the uncertainty is assumed to be zero. However, this module provides a procedure to combine uncertainty information and conservative estimates resulting in an overall ex-post project uncertainty."* Within GHG calculations, the project strives to use conservative estimates, however the audit team does not feel uncertainty within the carbon stock inventories is appropriately addressed. Specifically, re-measurement of forest inventory plots found substantial differences between original forest inventory measurement and re-measurement. Audit team witness of forest inventory techniques conducted by field crews confirmed that inventory SOPs were not followed (e.g. see height measurement and DBH measurement techniques discussed in sections 5.3 and 8.1 of this report). Further, the audit team conducted a sample of the data transcription between original field measurements and the field inventory spreadsheets used in biomass calculations. The following sub-plots were reviewed: • T5 P41 SB5: of 92 trees reviewed 4 errors were identified • T5 P50 SB4: of 117 trees reviewed 4 errors were identified Further a spot check of data transcription from original field inventory sheets revealed that inventory plots were inconsistently labelled, making it impossible to identify which inventory plots individual tree records were sourced from. For example, se T5 P50 SB4. Within the transect spreadsheet (electronic record) the trees are not listed as all SB4 within the original field data sheets (some trees listed as SB5 some listed as SB4). During the field audit this issue was discussed with PLANT staff and it was clear that no formal quality assurance check was completed and documented during the data transcription. As such it is not possible to know the magnitude of data transcription errors present within the field inventory. When combined with the identified errors in field measurements identified in section 5.3 and 8.1 of this report, it is not clear how the project can demonstrate that the field inventory has meet the following applicability requirement of X-UNC: *"Guidance on uncertainty – a precision target of a 95% confidence interval equal to or less than 15% of the recorded value shall be targeted. This is especially important in terms of project planning for measurement of carbon stocks; sufficient measurement plots should be included to achieve this precision level across the measured stocks."* Given these findings from the field audit, it is not clear how uncertainty is conservatively assumed to be equal to zero within the project GHG calculations.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 14/12**		

8 Monitoring plan

8.1 VCS Standard Section 3.17.2 VCS AFOLU Requirements Section 4.8.1: Monitoring plan

The project proponent shall establish a GHG information system for obtaining, recording, compiling and analyzing data and information important for quantifying and reporting GHG emissions and/or removals relevant for the project (including leakage) and baseline scenario.

A monitoring plan for the project that includes roles and responsibilities shall be established.
Where measurement and monitoring equipment is used, the project proponent shall ensure the equipment is calibrated according to the equipment's specifications and/or relevant national or international standards.

Findings from Review on 13 JANUARY 2012
The monitoring plan, presented in Section 4.3 of the PD v.1.1, describes the revision of the baseline, the monitoring of the actual carbon stock changes and greenhouse gas emissions, the monitoring of leakage carbon stock changes and greenhouse gas emissions. In accordance with **NCR 02/12** issued above, the monitoring procedures to account for the carbon net, shall be addressed by the new version of the M-MON module, v.2.0. The monitoring plan also describes the organizational structure, responsibilities and competencies and methods for generating, recording, aggregating, collating and reporting data on monitored parameters. Nevertheless, the SOPs and QA/QC procedures for the forest inventory shall be detailed and followed in accordance with the monitoring plan. **NCR 15/12** During the field audit, the audit team witnessed the project proponent re-measure several inventory sub-plots. Simultaneously, the audit team also re-measurement the sub-plots. Measured diameters from the audit team and the inventory crew were compared (noting paired t-tests could not be used as the re-measured plots had different total number of trees), and the diameter measurements between the inventory team and the verification team were not found to be statistically different. However, it should be noted that the diameter measurements of the inventory crew were found to be consistently lower than 1.3 m high (as this is the specified height within the inventory SOPs). Furthermore, in trees with large buttress swells or abnormally shaped stems, standardized procedures for measuring above the buttress swell were not able to be implemented as a ladder was not taken to the field in order to measure high enough on the stem to not be impacted by the buttress swell. As such, on average the inventory team diameter estimates were larger than the audit teams, however this difference was not found to be significant. During the field audit, the audit team also witnessed the inventory crew estimating the heights of the tree selected by the audit team by eye (procedure used in the field, during the forest inventory). Simultaneously, the audit team also re-measured the heights with a laser range finder. Measured heights from the audit team and the inventory crew were compared using a paired t-test (noting the data was tested for normality and found to not be normally distributed resulting from the low population size, as such this comparison is provided for reference only), and the diameter measurements between the inventory team and the verification team were not found to be statistically different. The heights measured by eye were consistently conservative. However, when compared to original field data, the audit team found that height measurements varied significantly between re-measured heights and field inventory heights. As such, given that interviews with the inventory crew confirmed that SOPs described within the PD and supporting documents were not applied, and re-measured plots highlight inconsistency in field measurements, the field inventory cannot be validated without further evidence supporting the accuracy (or accounting for error) within the field measurements (see findings and NCR in section 5.3 above). Also, as part of the monitoring plan, there are 7 fixed vigilance points distributed along the project area, which control all entrances and boundaries of the farm. All vigilance points are provided with lodgings for guards and their families.

Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 15/12** Also see findings and NCR in section 5.3 above regarding field inventory.		

8.2 VCS AFOLU Requirements Sections 3.5.3 and 4.8.2: Leakage monitoring

Leakage shall be monitored as set out in Section 4.6 of the VCS AFOLU Requirements. Where projects are required to account for leakage, such leakage evaluation shall be documented in the appropriate section of the project description and/or monitoring report, as applicable.

Findings from Review on 13 JANUARY 2012
Sections 1.13 and 4.3 of the PD v.1.1 describes that the leakage monitoring will be in accordance with the methodology VM0007. The leakage belt, establish based on a similarity analysis (see Figure 20 and 21 and Table 6 of the PD), in accordance with

VM0007, will be monitoring through remote sensing techniques.

Further, the proponents believe that the project will have positive impacts on surrounding areas, being a good example of the following technical and economic aspects:

- Management of forest resources with success and profit;
- Additional return to forest management, due to REDD incentives, which can compensate avoiding deforestation for other activities;
- Maintenance of real estate (land acquisition and grabbing dynamics), in addition to profits with sustainable management plus REDD.

According to reasons above, the project is anticipated to stimulate other landowners to adhere to the project concept (see Annex 1 of the PD).

Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

8.3 VCS Standard Section 3.18: Data and parameters available at validation

The project proponent shall ensure that all documents and records are kept in a secure and retrievable manner for at least two years after the end of the project crediting period.

Findings from Review on 13 JANUARY 2012			
In section 1.1 of the PD v.1.1 it is stated that "*All documents and records will be kept in a secure retrievable manner for at least two years after the end of the project crediting period"*. Section 4.1 of the PD v.1.1 describes the data and parameters available at validation.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

8.4 VCS Standard Section 3.17.1: Data and parameters monitored

Data and parameters used for the quantification of GHG emission reductions and/or removals shall be provided in accordance with the methodology. Quality management procedures to manage data and information shall be applied and established. Where applicable, procedures to account for uncertainty in data and parameters shall be applied in accordance with the requirements set out in the methodology.

Findings from Review on 13 JANUARY 2012			
Section 4.2 of the PD v.1.1 describes the data and parameters that will be monitored. However, as noted in section 4.1, due to the planned forest management activities in the project scenario the use of M-MON v1 is not found to be appropriate. As noted above, the use of M-MON v2.0 is necessary to accurately address carbon stock loses from forest management, as such the monitoring plan must account for additional monitoring requirements of M-MON v2.0.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	**NCR 16/12**		

8.5 Applicability and eligibility of monitoring equipment and procedures

Findings from Review on 13 JANUARY 2012			
During field audit, the audit team noticed that, because of the way the sample plots were delineated, some trees that were outside of the plot boundaries were measured as if they were inside the plot, and others that were inside the plots were not measured as if they were out of the plots. If these errors occur in a systematic way, the biomass estimation can be ether over or sub estimated. Also, some tree diameters were not re-measured at 1.3 m high, which corresponds to a deviation in the forest inventory procedures. Comparison of re-measured plot data to original inventory plot data suggests that measurement errors are systematic, as such a nonconformance was raised in relation to this issue in section 5.3 of this report. Systematic nonconformance with.			
Conformance	Yes ☐	No ☐	N/A ☐
NCR/OBS	**OBS 04/12**		

9 Environmental Impact

9.1 VCS AFOLU Requirements Section 3.1.4: Negative environmental and socio-economic impacts

Project proponents shall identify potential negative environmental and socio-economic impacts and shall take steps to mitigate them. Additional standards such as the Climate, Community & Biodiversity Standards (CCBS) or Forest Stewardship Council (FSC)

certification may be applied to demonstrate social and environmental benefits beyond GHG emissions reductions or removals. VCUs may be tagged with additional standards and certifications on the VCS project database where both the VCS and another standard are applied.

Findings from Review on 13 JANUARY 2012			
The Florestal Santa Maria S.A (FSM) property conducts its Forest Management in accordance with local regulation and has Sustainable Forest Stewardship Plan previously approved by SEMA (Environment Secretariat of the State of Mato Grosso) – Doc.#13. Furthermore, FSM committed with the FSC certification and currently, is carrying on a FSC certification process. The FSC field audit was conduct at the same time of the VCS audit field.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCRs or OBS raised.		

9.2 VCS AFOLU Requirements Section 3.1.5: Conversion of native ecosystems

Project activities that convert native ecosystems to generate GHG credits are not eligible under the VCS Program. Evidence shall be provided in the project description that any ARR, ALM or PRC project areas were not cleared of native ecosystems to create GHG credits (eg, evidence indicating that clearing occurred due to natural disasters such as hurricanes or floods). Such proof is not required where such clearing or conversion took place at least 10 years prior to the proposed project start date. The onus is upon the project proponent to demonstrate this, failing which the project shall not be eligible. **Additional requirements for PRC project types** are outlined in VCS AFOLU Requirements section 3.1.6.

Findings from Review on 13 JANUARY 2012			
The proposed project is a REDD project, with the goal of avoiding unplanned deforestation. During the field audit, the audit team confirmed that project activity do not convert native ecosystems to generate GHG credits, nor are there any intentions to do so.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not Applicable		

10 Comments by stakeholders

10.1 Findings from stakeholder comments received

Findings from Review on 13 JANUARY 2012			
During the field audit, the project proponent committed to build a permanent communication channel between stakeholders and project proponent as well as notified the local's authorities following the validation. However, such a commitment is not described in the PD v.1.1.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	**OBS 05/2011**		

11 Non-permanence Risk Assessment

Note: Risk factors are determined through a qualitative analysis conducted, following the guidance of the VCS AFOLU Non-Permanence Risk Tool. As stated in Section 1.1.3 "Project proponents shall clearly document and substantiate the risk analysis covering each risk factor applicable to the project. During the analysis, the validation/verification body shall evaluate the risk assessment undertaken by the project proponent and assess all data, rationales, assumptions, justifications and documentation provided by the project proponent to support the non-permanence risk rating."

11.1 VCS AFOLU Requirements Section 3.6.1: Projects with tree harvesting

Projects with tree harvesting shall demonstrate that the permanence of their carbon stock is maintained and shall put in place management systems to ensure the carbon against which VCUs are issued is not lost during a final cut with no subsequent replanting or regeneration.

Findings from Review on 13 JANUARY 2012			
FSM currently has a forest management plan in place, as well as contract with commitment to continue forest management in the 20% area outside of Legal Reserve. The 80% of the project area is in documented Legal Reserve (as defined by the Brazilian Forest Code), and as such is protected by the Brazilian forest code (however, non-compliance with the Forest Code within the region has been demonstrated). To further support the long term protection of forest carbon stocks, the project area is currently in the process of undergoing FSC certification, which ensures sustainable management of the forest.			
Conformance	Yes ☒	No ☐	N/A ☐
NCR/OBS	No NCR or OBS raised.		

11.2 VCS AFOLU Requirements Section 3.6.2: PRC project permanence

PRC Projects ONLY: PRC projects shall demonstrate that the permanence of their peat carbon stock will be maintained. The maximum quantity of GHG emission reductions that may be claimed by the project is limited to the difference between project and baseline scenario after a 100 year time frame, as set out in Section 4.5.18.

Findings from Review on 13 JANUARY 2012			
This project does not include PRC activities; as such this criterion is not applicable.			
Conformance	Yes ☐	No ☐	N/A ☒
NCR/OBS	Not Applicable		

11.3 VCS AFOLU Requirements Section 3.6.3 and VCS AFOLU Non-Permanence Risk Tool Section 2.1.1: Risk analysis

Projects shall prepare a non-permanence risk report in accordance with VCS document *AFOLU Non-Permanence Risk Tool* at both validation and verification. In the case of projects that are not validated and verified simultaneously, having their initial risk assessments validated at the time of VCS project validation will assist VCU buyers and sellers by providing a more accurate early indication of the number of VCUs projects are expected to generate. The non-permanence risk report shall be prepared using the *VCS Non-Permanence Risk Report Template*, which may be included as an annex to the project description or monitoring report, as applicable, or provided as a stand-alone document.

The potential transient and permanent losses in carbon stocks shall be assessed over a period of 100 years from the start of the current monitoring period, unless otherwise specified in Sections 2.2 to 2.4, to determine the appropriate risk rating.

Risk Factor	Self Assessment Risk Rating	Findings (including description of any mitigation activities as required per VCS AFOLU Non-Permanence Risk Tool Section 2.1.2.2)	NCR/OBS
Internal Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.2):			
Project Management: Shall be assessed using Table 1 of VCS AFOLU Risk Tool.	-3	Criteria a: No justification is provided. The project must provide a justification and evidence as to why individual risk criteria do not apply. Section 1.1.3 of the VCS AFOLU Non-Permanence Risk Tool requires that project proponents clearly document and substantiate the risk analysis covering <u>each risk factor</u> applicable to the project. As evidence demonstrating why factors were not applicable was not provided, the risk report does not provide transparent evidence of conformance. During the field audit the audit team reviewed the risk report in full with the FSM management team, and noted that the risk report must include justification for each risk factor. (**NCR 17/12**) Criteria b: No justification provided. (**NCR 17/12**) Criteria c: No justification provided. (**NCR 17/12**) Criteria d: No justification provided. (**NCR 17/12**) Criteria e: The Management Team is comprised of FSM, Bunge, and VO_2. This	**NCR 17/12** **NCR 18/12** **NCR 19/12**

		team comprises a “Steering Committee” which is responsible for all decisions related to project activities. This is defined in a legally binding MOU which was reviewed by the audit team. The Steering Committee team includes members with extensive management experience, including extensive management of a forest management enterprise (as demonstrated in the PD supported by review of management team competency during the field audit). Further, the diverse steering committee includes members with both extensive experience in large management systems (including forestry), as well as experience auditing AFOLU projects (as noted in CV of Bunge staff member). Further the steering committee is supported with technical assistance provided by PLANT and a Brazilian Law Firm, who add additional expertise necessary for the implementation with project activities. However, Bunge Staff are not included in the risk mitigation criteria, as such the Non-Permanence Risk Report does not provide sufficient evidence of conformance with risk mitigation criteria. Further, the management team does not include any members with experience developing and implementing a REDD project under the VCS. The mitigation criteria requires individuals who have successfully managed projects through validation, verification, and issuance of GHG credits. During the field audit this was discussed with the project proponent and noted that at this time very few individuals qualify for this mitigation criteria as very few REDD projects have been approved under the VCS. Further, the audit team contacted the VCS directly for clarification on this point, and the VCS confirmed that in order to qualify for this risk mitigation criteria, the project must include individuals who fully meet this criteria. As such, the project does not currently qualify for this risk mitigation criteria. (**NCR 18/12**) Criteria f: The audit risk report describes an adaptive management plan. Interviews with FSM staff confirmed that FSM plans to use adaptive management strategies, however no evidence of a clearly documented adaptive management plan was provided to the	

		audit team, and the description provided by FSM staff was not found to be sufficient evidence that an adaptive management plan is currently in place. In order to demonstrate clear conformance with this criteria the project proponent must clearly demonstrate that an adaptive management plan that considers the realm of potential risks and obstacles to the project, as well as a system for adapting and changing to circumstances is in place within the FSM management process. (**NCR 19/12**)	
Financial viability: Shall be assessed using Table 2 of VCS AFOLU Risk Tool.	0	Cash flow assessment: According to the worksheet 'Clash Flow Redd', out of the spreadsheet 'AVALIACAO_DA_MADEIRA__MAIS_REDD-AUDITORIA_REV1 setape c protecao.xls', cash flow breakeven point is at year 3. Demonstration of secured funding: During the field audit, the audit team reviewed project documents supporting demonstration of secured funding through a purchase agreement of credits established between FSM and Bunge (VERPA contract reviewed by audit team). The purchase agreement between FSM and Bunge was demonstrated evidence of secured funding to meet this criterion.	No NCR or OBS raised. Note that **NCR 06/12** will have a direct impact in this criteria, and once it is corrected, the cash flow breakeven point will have to be reassessed.
Opportunity cost: Shall be assessed using Table 3 of the VCS AFOLU Risk Tool.	0	NPV Assessment: The project presents a detailed financial analysis in the worksheet 'Consolidated CF', out of the spreadsheet 'AVALIACAO_DA_MADEIRA__MAIS_REDD-AUDITORIA_REV1 setape c protecao.xls'. In this worksheet, an IRR comparison of the proposed project against alternative baseline scenarios is presented. It should be noted that the REDD project IRR is 9,85%, however in Table 5 of the PD, it states that adding the revenue from VCUs generated by the REDD project will increase the IRR to 9.88% (note this is slightly different than the IRR listed in the supporting documents). The VCS requires an opportunity cost analysis to be completed covering the crediting period. Further, for the NPV analysis, section 2.2.3.1 of the VCS AFOLU Non-Permanence Risk Tool requires that all relevant assumptions, parameters, and data sources are referenced so that the NPV analysis can be transparently evaluated. The	**NCR 20/12** **NCR 21/12** Noting that **NCR 06/12** will have a direct impact in this criterion, and once it is corrected, the cash flow breakeven point will have to be reassessed.

		worksheet submitted as evidence for demonstration of conformance with the risk criteria selected did not include a clear NPV analysis of all identified baseline scenarios with references to all data sources, assumptions, and parameters used to conduct the NPV analysis. (**NCR 21/12**) Criteria G: The project proponent is not a non-profit, as such this mitigation risk is not applicable. Criteria H and I: The project proponent argues that the project is protected by a legally binding commitment to continue management practices that protect carbon stocks. The project sites the document AV-03-73958 which refers to the project proponent obligation to maintain forest management practices within the project area. This agreement does not have a specific timeline of 100 years, and review of the agreement by the audit team found that it was not sufficient to demonstrate that the agreement could not be broken within the 100 year time period required for the mitigation criteria. As such, the project rating of -8 is not found to be appropriate. The audit team agrees that the project is protected by a legally binding agreement, however the agreement is not found to be sufficient to demonstrate legally binding commitment for a 100 year period. (**NCR 20/12**)	
Project longevity: Shall be assessed using Table 4 of the VCS AFOLU Risk Tool.	15	See findings above regarding the legal agreement presented and reviewed by the audit team. Review of the calculated project longevity found that the project longevity risk criteria was calculated correctly following demonstrated evidence of a legal agreement to continue management practices within the project area.	No NCR or OBS raised
Total Internal Risk: Shall be calculated using Table 5 of the VCS Risk Tool.	12	The nonconformances highlighted above regarding internal risk assessment must be addressed before the internal risk rating can be evaluated by the audit team.	See NCRs related to internal risk.
External risks (VCS AFOLU Non-Permanence Risk Tool Section 2.3):			
Land and resource tenure: Shall be assessed using Table 7 of the VCS Risk Tool.	0	Criteria a: Clear ownership of the project area by FSM was demonstrated by the project proponent (see findings above related to project ownership). Criteria b: Not applicable	**NCR 17/12**

		Criteria C: No justification provided within the risk assessment report. During the field audit, the project proponent provided the audit team with evidence from a review conducted by FUNAI that Rio Pardo Indigenous Territory located 27.200 metros far away from the FSM propriety, demonstrating that no indigenous peoples territory claims were identified within the project area, however this is not described within the risk report as demonstrated evidence. (**NCR 17/12**) Criteria d: See findings for criteria c above. Criteria e: See findings related to project longevity above where the legally binding commitment is evaluated. Criteria f: Not applicable	
Community engagement: Shall be assessed using Table 8 of the VCS Risk Tool.	0	Criteria a: No justification provided, however this criteria is not applicable. Criteria b: During the field audit, the audit team reviewed video recordings of project proponent communication meetings with relevant community members. Further, the audit team interviewed community members living in base camps on the periphery of the project area. Community member interviews confirmed that the community members were consulted about the project activities. Criteria c: The project has provided evidence to support the net positive benefits to the community. These findings were confirmed through interviews with FSM staff, and also demonstrated through the FSM pursuit of FSC certification in addition to the VCS validation. FSC certification includes criteria to reduce negative impacts on FSM staff. As such this mitigation risk is found to be appropriate.	No NCR or OBS raised.
Political risk: Shall be assessed using Table 8 of the VCS Risk Tool.	0	Criteria C: The risk rating for this criteria is based on the calculated governance score of -0.32, and was found to be appropriate. Criteria f: The application of this risk mitigation criterion is found to be appropriate as the project is located in Brazil.	No NCR or OBS raised.
Total external risks: Shall	0	Additional justification must be added to	No NCR or OBS raised.

be calculated using Table 9 of the VCS Risk Tool.		clearly demonstrate conformance with all risk criteria related to External Risks (see risks related to land tenure above). However, the audit team found the risk rating for External Risks to be appropriate.	
Natural Risks (VCS AFOLU Non-Permanence Risk Tool Section 2.4):			
Natural risks: Shall be assessed using Table 10 of the VCS Risk Tool.	0.5	The risk assessment report identifies fire as the only potential natural risk to project carbon stocks. The likelihood of fire is listed as every 10 to less than 25 years according to the area history. The project sites the risk map of burning areas in the state of Mato Grosso specific for the municipality the project is located in. According to this risk map, the fire risk is listed as minimum. Further the project has implemented fire risk mitigation measures including regular monitoring with internal communication between perimeter base camps along the project border. Interviews with FSM staff responsible for implementing fire response activities confirmed knowledge of the undocumented fire response plan. Additionally, families living in perimeter base camps (visited by the audit team during the field audit) also confirmed a working knowledge of the response activities to fire when detected along or within the project area. As such this risk rating is found to be appropriate. The project has determined that there is no risk of Pest and Disease Outbreaks, Extreme Weather, Geologic Risk, and an insignificant risk of Blow-Down Wind. However, the project provides no supporting references to justify these claims. As such the evidence provided within the risk assessment report is not sufficient to demonstrate that no risk of other non-fire natural risks exists within the project area. (**NCR 22/12**)	**NCR 22/12**

11.4 **VCS AFOLU Non-Permanence Risk Tool Section 2.5.1 – 2.5.3: Overall Project Risk Calculation**

Note: As per VCS AFOLU Non-Permanence Risk Tool 2.5.2, the minimum risk rating shall be 10, regardless of the risk rating calculated using Table 11. Furthermore, where overall risk rating is greater than 60, project risk is deemed unacceptably high and the project fails the entire risk analysis (see VCS AFOLU Non-Permanence Risk Tool 2.5.3). For additional information on project risk assessment failure see VCS AFOLU Non-Permanence Risk Tool 2.1.2.5.

Risk Factor	**Self Assessment Risk Rating**	**Findings**	**NCR/OBS**

Overall non-permanence risk rating as determined using Table 11 of the VCS Risk Tool.	12.5	Due to nonconformance identified above, the audit team is unable to validate the risk assessment rating at this time.	See NCRs related to risk assessment above.

11.5 VCS AFOLU Non-Permanence Risk Tool Section 2.5.4: Buffer determination

To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (e.g., an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS document *Registration and Issuance Process*. Where a project is divided into more than one geographic area for the purpose of risk analysis, the overall risk rating percentage for each area shall be multiplied by the net change in the project's carbon stocks (stated in the verification report) in such geographic area.

Findings from Review on 13 JANUARY 2012			
The project has determined a risk buffer of 12.5%, however, as noted in 11. 3, multiple nonconformances exist within the risk assessment. Further, the 12.5% buffer is used in both GHG calculations and financial projections. If the buffer determination is changed as a result of the validation audit, these calculations will also need to be adjusted. Further, please refer to the findings above related to the miss-calculation of the redistribution of buffer credits at future verifications.			
Conformance	Yes ☐	No ☒	N/A ☐
NCR/OBS	See NCR related to risk assessment and buffer credit redistribution.		

APPENDIX B: Organization Details

Contacts

Primary Contact for Coordination with Rainforest Alliance

Primary Contact, Position:	Marcelo Martins Lunardelli
Address:	Rua Augusta 2883 - Sao Paulo
Tel/Fax/Email:	mml@florestalsantamaria.com.br

Billing Contact

Contact, Position:	Same as above.
Address:	Same as above.
Tel/Fax/Email:	Same as above.