

**Initial and periodic VCS Verification of the
first monitoring period of the “Multi-
Species Reforestation in Mato Grosso”**

ONF International

VCS Verification Report

22 April 2011

Ernst & Young et Associés

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Initial and periodic VCS Verification of the first monitoring period of the "Multi-Species Reforestation in Mato Grosso"	Christophe Schmeitzky
Client:	Project Title:
ONF International	Multi-Species Reforestation in Mato Grosso
Summary:	
<p>Ernst & Young France has performed a VCS verification of the ARR project: "Multi-Species Reforestation in Mato Grosso". The verification is based on the currently valid documentation of the Voluntary Carbon Standard 2007.1 (VCS 2007.1) based on the UN Framework Convention on Climate Change (UNFCCC). The verification is also based on the valid AFOLU guidelines.</p> <p>The ONF International (ONFI) is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project "Multi-Species Reforestation in Mato Grosso" on the basis set out within the project Monitoring Plan attached to the final VCS PD. The development and maintenance of records and reporting procedures are in accordance with that plan. The calculation and determination of GHG emission reductions from the project is in the responsibility of the management of the project.</p>	
Work carried out by:	Number of pages:
Thomas Roulleau Fernando Neto	45

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Abbreviations

AR-AM Approved Methodology for Afforestation / Reforestation
ARR Afforestation, Reforestation, Revegetation
AFOLU Agriculture, Forestry and Other Land Use
CAR Corrective Action Request
CDM Clean Development Mechanism
CL Clarification Request
DOE Designated Operational Entity
EB Executive Board at the UNFCCC
EF Emission Factor
EIA Environmental Impact Assessment / Environmental Assessment
ER Emission Reduction
FAR Forward Action Request
GHG Green House Gas(es)
GIS Geographic Information System
GPG Good Practice Guidance
GPS Global Positioning System
IPCC Intergovernmental Panel on Climate Change
IRL Information Reference List
KP Kyoto Protocol
LULUCF Land-Use, Land-Use Change and Forestry
MP Monitoring Plan
PD Project Document
PP Project Participant
SOP Standard Operating Procedure
UNFCCC United Nations Framework Convention on Climate Change
VER Verified Emission Reduction
VCS Voluntary Carbon Standard

Introduction

A. Objective

ONF International has commissioned an independent verification by Ernst & Young of its VCS project activity: “Multi-Species Reforestation in Mato Grosso”. This first verification has been conducted along with the validation of the VCS project activity.

The objective of this verification is to comply with the requirements of the Voluntary Carbon Standard (VCS) 2007.1, which is in line with the paragraph 62 of the UNFCCC CDM Modalities and Procedures. According to these documents, we shall:

- ensure that the project activity has been implemented and operated as per the validated PD “Multi-Species Reforestation in Mato Grosso” Version 01.1, dated 11/03/11, and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place,
- ensure that the supporting documents provided are complete, verifiable and in accordance with applicable VCS requirements,
- ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the approved methodology and the monitoring plan,
- evaluate the data recorded and stored as required by the approved methodology AR-AMS0006 Version 1, respective tools, and the monitoring plan.

B. Scope and Criteria

The verification scope covers an independent and objective review of ex-post monitored reductions in GHG emissions by the Designated Operational Entity. The verification is based on the submitted monitoring report, the validated Project Description (PD) including its monitoring plan and validation report, the applied monitoring methodology, rules and guidance from the VCS and any other information and references relevant to the project activity’s resulting emission reductions. These documents are reviewed against the requirements of the VCS Standard 2007.1 related rules and guidance.

We have applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion. To perform validation work, we have taken into account both quantitative and qualitative information on emission reductions.

The objective of the verification is not to provide any consultancy services towards the client. Requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities, in order to comply with the requirements of applied methodology, rules and guidance.

The first verification has been performed along side the validation.

C. VCS project Description

Project activity: “Multi-Species Reforestation in Mato Grosso”

Project Participants: ONF Brasil, Office National des Forêts (ONF), ONF International, Peugeot S.A.

Location of the project: The project boundary includes 1096 ha in the municipality of Cotriguaçu, State of Mato Grosso, Federative Republic of Brazil.

Date of finalized validation (by Ernst & Young): 22 Avril 2011

Starting date of the crediting period: 01 November 1999

D. Level of assurance

The level of assurance of this report is defined as reasonable.

Methodology

A. Verification Process

The verification process is based on the methods presented in the UNFCCC CDM Validation and Verification Manual.

Standard auditing techniques have been adopted for the verification process. The verification works started with a desk review, followed by an on-site visit. The next step is the formalization of the findings in the verification protocol. Following this first draft report, the resolution of the findings is realized through communication with the PPs, and then finally the verification report is produced. Before the delivery of the final verification report, an internal quality control is performed by the Quality and Internal Control Verifier.

B. Verification Team

The verification team has been appointed according to the experience in GHG verification, experience in the forestry sector, and relevant host country experience required amongst team members for verifying the GHG removals achieved by the project activity.

The verification team consisted of the following members:

Name	Qualification	Experience in GHG verification	Experience in the forestry sector	Experience in the host country
Thomas Roulleau	ATL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Fernando Neto	GHG-A		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Thomas Roulleau graduated as an engineer at AgroParisTech (INAPG) in Environmental Economy. During his training, he specialized in CO2 market and credits (EU-ETS, Voluntary market), carbon projects development (CDM, JI), and forestry projects. He joined the Paris office of Ernst & Young in 2007 after a first work experience at Lafarge (CDM development, global carbon strategy).

Fernando Neto is a Forest Engineer implied in the REDD implementation in Brazil. He is also the executive director of the “Fórum Nacional das Atividades de Base Forestal”, firm that develops projects for the environmental and forest management. He has been involved as a UNPD Consultant at the Brazilian Environmental Ministry.

C. Review of Documents

The first version of the Monitoring Report submitted by the PP is dated 25 April 2009. The MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- verify the completeness and the correctness of the data and the information presented in the MR,
- check the compliance of the MR with respect to the monitoring plan attached to the registered PD and with the applied methodology. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid,

- evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of all documents reviewed is available in Annex 2 of this report.

D. On-site Assessment and follow-up Interviews

Between 21/05/2010 and 27/05/2010 Ernst & Young performed physical site inspections and on-site interviews with project stakeholders to:

- confirm the implementation and operation of the project,
- review the design and measurements of the permanent sample plots to obtain the monitoring parameters including calibrations of measurement tools,
- verify the boundary of the strata and thus overall area of the actual project implementation,
- review the data flow for generating, aggregating and reporting the monitoring parameters,
- confirm the correct implementation of procedures for operations and data collection,
- cross-check the information provided in the MR documentation with other sources,
- review the calculations and assumptions used to obtain the GHG data for emissions in removal, in particular ensuring the required precision level,
- identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.

A list of the persons interviewed during this verification activity is included in Annex 2. This site visit was common for the validation and the first verification.

E. Resolution of Clarification and Corrective and Forward Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions, clarifications, and any other outstanding issues which needed to be clarified for our conclusion on the project design. The CARs and CRs raised were resolved during communication between the client and Ernst & Young. To guarantee the transparency of the verification process the concerns raised and responses that were given are documented in more detail in the verification protocol in Annex 1.

A Corrective Action Request is raised we identified:

- non-conformities in monitoring and/or reporting with the monitoring plan and/or methodology;
- that the evidence provided is not sufficient to prove conformity;
- mistakes in assumptions, data or calculations that impair the GHG removals;
- FARs stated during validation that are not solved until the on-site visit.

A Clarification Request is raised where we do not have enough information or the information is not clear in order to confirm a statement or data.

A Forward Action Request is raised where we identify that monitoring and/or reporting require special attention or adjustments for the next verification period.

Information or clarifications provided as a response to a CAR, CL or FAR could also lead to a new CAR.

F. Internal Quality Control

As final step of a verification activity the final documentation, which includes the verification report and the verification protocol, has to undergo an internal quality control by the Quality Internal Controller. In this particular case, the review process was carried out by Xavier Guillas, who is the technical Reviewer, with the relevant expertise in the auditing process.

After confirmation of the PP, the verification statement and relevant documents are submitted to the VCSA.

Verification Findings

A. Remaining issues, including any material discrepancy, from previous validation

The first verification has been performed along side the validation. Only one Forward Action Request (FAR) has been raised in the validation report. This FAR concerns the socio-economic monitoring, which is not required by the VCS and the applied methodology. Moreover, this FAR does not impact the accuracy of GHG removal calculations.

B. Project Implementation

The project is implemented according to the description presented in the registered PD. We reviewed, through the visual inspection that the plantations as described in the proposed VCS project activity including permanent sample plots for data collecting have been implemented in accordance with the registered PD.

As described in the registered PD, 1096 ha have been planted with various species. However, the site visit revealed the existence of “Leiras”, which are woody detritus resulting from deforestation activities by the former landowner, where no tree has been planted. Therefore, the area corresponding to this “Leiras”, accounting for 6 ha have been corrected in the monitoring report. Therefore, the project area used in the monitoring report to calculate the emission removals is 1090 ha.

In the first monitoring period the amount of net anthropogenic GHG removal was very close to the ex-ante net anthropogenic GHG removal included in the registered PD (138.205 t CO₂-e).

C. Completeness of Monitoring

The implemented monitoring procedures are in line with the requirements of the validated monitoring plan as well as with the applied methodology AR-AMS0006 (Version 01), except the deviations listed in section 3.2. below.

Compliance of the monitoring plan with the monitoring methodology

The monitoring plan has been built in line with the monitoring methodology AR-AMS0006 (Version 01).

Compliance of the monitoring with monitoring plan

The monitoring has been carried out in line with the monitoring plan included in the validated PD, except minor deviations listed below:

- According to the monitoring plan, 10% of the inventory measurements should be independently verified by different personnel. During the audit, it has been revealed that this verification is not performed, and therefore shall be considered as a deviation to the monitoring plan.
- The inventory team measured only one stem on trees forking below 4 ½ feet, instead of measuring all the stems as requested in the MP. This deviation to the monitoring plan is conservative.

D. Accuracy of Emission Reduction Calculations

All data has been available and all the parameters have been monitored in accordance with the registered monitoring plan. As discussed in section 3.3, some parameters were monitored in a manner deviating from the Monitoring Plan, which does however not affect the accuracy of the calculations of net anthropogenic GHG removals.

The reported data have been cross-checked against other sources available.

We reviewed that the methods and formulae used to obtain the baseline and project GHG removals, as well as project and leakage emissions are appropriate and in line with the registered monitoring plan and applicable methodology.

We reviewed that the monitoring report includes all relevant parameters and the monitored data at the intervals required by the methodology and PD, considering the above mentioned deviations. All assumptions, emission factors and default values (ex-ante values from PD) used in the monitoring have been correctly justified. All the emission factors and default values are explicitly mentioned in the monitoring report.

We reviewed the provided Excel spreadsheet for the calculation of these parameters and we checked that the applied spreadsheet formulas and connections are correct and in line with the indicated emission reduction calculation in the monitoring plan as well as in the validated PD and the applied methodology.

We reviewed that the applied default values were in line with the methodology and the registered monitoring plan.

Final results were rounded in a conservative manner.

During the onsite audit, we reviewed that the data handling and compiling system was appropriate and reliable. We checked that the installed sample plots have been well maintained and that the measured data were accurate within the indicated accuracy (see section below).

As defined in the Monitoring Plan and considered good practice by IPCC, the calculations of carbon sequestered per strata are determined with a maximum allowable precision level (standard error) of 10% of the mean, at 95% confidence.

In cases where the required precision level was not reached, the lower end of precision level (standard error at 95% confidence) was conservatively used for calculation of the mean, in order to avoid an overestimation of the mean amount of carbon per strata.

E. Quality of Evidence to Determine Emission Reductions

We reviewed that the sample plots design and locations were in compliance with the monitoring plan and with good practice according to IPCC.

Locations of sample plots were verified during the field visit using GPS. The sample plots selected by the audit team have been selected randomly. The GPS positions of the corner and the size of sample plots have been verified during the site visit.

For a selection of sample plots, measurements of trees have been realized, and were consistent with the measurement performed by the PP.

F. Management and Operational System

Based on the documents provided and the on-site verifications and interviews, we reviewed that the management and operational system of this project were suitable. The operational structure is described in the QA/QC Manual and in the PD, including the identification of responsibilities.

Similarly, the management of internal audit, as well as data management are well described in the QA/QC Manual and in the Monitoring Plan, and correctly applied on site.

G. Risk Analysis

The risk assessment has been conducted according to the Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination. The details of the risk assessment are presented in the table 3.

Each risk category was assessed based on the VCS guidance and the input provided by the PPs (IRL 52). The information was validated and cross-checked through document review, onsite visits of the project area and interviews conducted.

Based on the VCS publication of 8 September 2010, which clarify the risk assessment for fire, the project activity can be considered with a low level of risk, being consistent with the following category: "High fire return interval (<50 years) with best-practice fire prevention measures such as fuel removal, fire breaks, fire towers and firefighting equipment."

As requested by the VCS Program Update of 13 April 2010, the risk factor with the highest rating determines the project's overall risk class and shall be used to determine the required buffer withholding percentage. Therefore, the proposed project's overall risk class shall be medium.

Following the requested of the VCS Program Update of 13 April 2010, the required buffer withholding percentage shall be the maximum percentage in the buffer range for the determined class, unless justification for a lower withholding percentage can be demonstrated. In the proposed project activity, all risk factors have been rated as "Low", except the risk for financial capacity ("Medium"), the risk of rising land opportunity costs and the risk of pest and disease attacks ("Low – Medium"). It is considered that the minimum percentage of the "Medium" class is justified for the project activity for the following reasons:

- Risk for financial capacity: this risk has been rated as medium due to the financing of research activities which are renewed every 5 years. The funds from the framework agreement between Peugeot and ONF are mainly used for carbon sequestration activities (operational costs, expertise, monitoring) and research activities. Besides, a financing agreement between Peugeot and ONF is signed every 5 years for research activities. The allocation of the research funds are discussed every year. In reality, not all these funds are dedicated to research activities stricto sensu, as 50% of the project manager onsite is paid by these funds. Nonetheless, this financing agreement on research activities has been always renewed and should continue in the future. If it is not the case, the carbon sink side of the project activity would not be jeopardized as ONF must honor the framework agreement with Peugeot on 40 years. Therefore, the risk for financial capacity can be conservatively considered as medium. However, as it is guaranteed that the project of carbon sequestration through multi-species reforestation will be managed by ONF during 40 years, the minimum percentage in the medium buffer range is justified.

- Risk of rising land opportunity costs: the project area is competing with grazing activities which are more attractive, and will become more and more attractive in the future. On the other hand, the framework contract between Peugeot and ONF on 40 years, the creation of the RPPN, the involvement of the municipality of Cotriguaçu in REDD+ programme are many reasons to consider that the project area is protected from opportunity costs during the duration of the project activity and later. Therefore, the risk of rising land opportunity costs is considered as Low – Medium, and the minimum percentage in the medium buffer range is justified.

- Risk of pest and disease attacks: during the site visit, the invasive plant malicia has been observed on some parcels. This invasive plant represents a risk for the most humid parcels of the project area. However, this risk is properly controlled through specific actions depending on the level of invasion of the parcels. Moreover, this local invasive plant needs light, and as far as the tree cover of the project area will grow, the malicia will face less favorable environment. Therefore, the risk of pest and disease attacks is considered as Low – Medium, and the minimum percentage in the medium buffer range is justified.

In conclusion, the buffer withholding percentage for the proposed project activity shall be 20 %.

H. Double-Counting and Carbon Ownership

Based on a review of the recognized registries of VER standards and an analysis of internet sources, we have not detected indications that the same project activity is included into any other standards or schemes intended to generate Voluntary Emission Reductions or renewable energy certificates. This was furthermore confirmed by the project participants during the site visit.

Nonetheless, as double-counting cannot be fully excluded based on the performed assessment, Ernst & Young refrains from any liabilities related to the potential double-counting of carbon rights. The rights to use the carbon credits are clarified in the contract between ONF and Peugeot IRL (15).

ONF International

Multi-Species Reforestation in Mato Grosso, Brazil

VCS Verification conclusion

Further to ONF International's request, we have performed a review of the VCS project activity Multiple species reforestation project Peugeot S.A. – O.N.F.¹ “The Project” to obtain reasonable assurance that the GHG removals and emissions in the monitoring period from 01 November 1999 to 25 April 2009 were calculated in accordance with all relevant VCS requirements for the verification of ARR projects (“The VCS Requirements”) consisting in:

- The VCS Standard 2007.1
- Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination
- Tool for AFOLU Methodological Issues
- Guidance for Agriculture, Forestry and Other Land Use Projects
- Decisions and specific guidance, and policy announcements by the VCSA published under <http://www.v-c-s.org/>
- The CDM applied methodology : AR-AMS0006 Version 1
- Validation and Verification Manual (VVM)
- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodology (CDM-NM)

It is the responsibility of ONF International to prepare the GHG removal and emission data and the reported GHG removals on the basis set out within the project’s Monitoring Plan indicated in the registered Project Description (PD) version 01.1, dated 11/03/2011 and the applied methodology AR-AMS0006, Version 01.

Baseline net GHG removals	0 t CO ₂ e
Actual net GHG removals	140,365 t CO ₂ e
Leakage emission	0 t CO ₂ e
Project emissions	0 t CO ₂ e
Net anthropogenic GHG removals:	140,365 t CO ₂ e
Buffer to ensure permanence as per VCS: 20%	28,073 t CO₂e

Total amount of VCUs generated	112,292 tCO₂e
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(pending on double approval of the risk buffer)

It is our responsibility to express an opinion on the GHG removals and emissions of the project on the basis of our procedures. Our procedures were conducted in compliance with the international standard ISAE 30002 of IFAC, the “Clean Development Mechanism Validation and Verification Manual”, the VCS Standard 2007.1 and the tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination. Our independence is defined by our professional code of ethics and internal Independence Policy.

Nature and scope of our procedures

We performed the following procedures to be able to express an opinion:

¹ The project activity “Multiple species reforestation project Peugeot S.A. – O.N.F.” as described in the Project Description version 01.1 dated 11/03/2011.

² ISAE 3000: "Assurance Engagement other than reviews of historical data", International Federation of Accountants, International Audit and Assurance Board, December 2003.

- Review of the Monitoring Report (MR) submitted by the Project Participant and additional background documents related to the monitoring of net GHG removals have been reviewed to verify the completeness and the correctness of the data and the information presented in the MR. The compliance of the MR with respect to the monitoring plan attached to the registered PD and with the applied methodology has been reviewed. A complete list of all documents and proofs reviewed is attached as Annex 5 of the document attached to this report.
- Interviews and physical site inspection with project stakeholders between 21/05/2010 and 27/05/2010 to confirm the implementation and operation of the project, to review the design and measurements of the permanent sample plots, to obtain the monitoring parameters including calibrations of measurement tools, to verify the boundary of the strata and thus overall area of the actual project implementation, to review the data flow for generating, aggregating and reporting the monitoring parameters, to confirm the correct implementation of procedures for operations and data collection, and to identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters. A complete list of all persons interviewed in this context is provided in Annex 2 of the document attached to this report.
- Resolution of Clarification and Corrective Action Requests (CLs and CARs) during communication between the client and Ernst & Young. To guarantee the transparency of the verification process the concerns raised and responses that were given are documented in more detail in the verification protocol in Annex 1.

As final step of a verification activity, the final documentation, which includes the verification report and the verification protocol, has to undergo an internal quality control by the Quality Internal Reviewer.

Opinion

In our opinion, on the basis of the verification work undertaken, and in all material aspects, the GHG removals and emissions in the monitoring period from 01 November 1999 to 25 April 2009 are fairly stated.

April 22nd 2011, Paris-La Défense, France.

ERNST & YOUNG et ASSOCIES

Environment and Sustainable Development

Christophe Schmeitzky

Annex 1: Verification Protocol

A. Table 1: Requirement Checklist

Project Activity Implementation

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Project activity / Forestry measures					
<i>Location(s)</i>					
Description / Address	1, 2, 3, 4	DR	Title of the PDD: Multiple species reforestation project Peugeot S.A. – ONF. Version 1.0 Address for correspondence: Office National des Forêts International (O.N.F. International) 2, avenue de Saint Mandé, Paris Cedex 12. Represented by Martin PERRIER, Director	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GPS coordinates	1, 2, 3, 4	DR, I	The GPS coordinates of the project site are: - Latitude: 9°47'55" to 9°53'31" South Corrective Action Request 1 Please precise the longitude of the project in the PDD	CAR 1	<input checked="" type="checkbox"/>
<i>AR activity</i>					
Total Area	1, 2, 3, 4	DR, I	The VCS project area is one discrete area located on the municipality of Cotriguaçu, in the State of Mato Grosso, Federative Republic of Brazil. It involves the plantation of 1'096 hectares under the VCS validation and verification programme. See Corrective Action Request 9 See Corrective Action Request 10	CAR 9 CAR10	<input checked="" type="checkbox"/>

*MoV = Mean of Verification, DR = Document Review, I = Interview,

Baseline Strata	1, 2, 3, 4	DR, I	One baseline strata has been identified corresponding to the land-use prior to project activity: grazing activities.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Project Strata	1, 2, 3, 4	DR, I	26 strata were distinguished, based on the species or group of species used the planting density and the year of planting. Clarification Request 1 Provide the procedure for monitoring the strata area and the sheets of field measurements.	CL1	<input checked="" type="checkbox"/>
Operation Status during Verification					
Approvals/Licenses Land tenure and carbon rights	1, 2, 3, 4	DR, I	Land tenure is owned by the project developer (ONF Brazil). Clarification Request 2 Please provide the contract between ONF and Peugeot SA over the sequestration rights.	CL2	<input checked="" type="checkbox"/>
Actual Operation Status	1, 2, 3, 4	DR, I	The planting of the area is finalized.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Remarks to Special Operational Status During the Verification Period	1	I	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Organization					
Project Participant(s)					
Entity / Responsible person	1, 2, 3, 4	DR, I	Name of responsible person in charge of monitoring: Thomas Dufour.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CDM Project management	1, 2, 3, 4	DR, I	Name of responsible person for CDM project: Thomas Dufour.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Quality Management System					
Quality Management System					
Quality Management Manual	1, 2, 3, 4	DR, I	Clarification Request 3 Please provide the Quality Management Manual	CL3	<input checked="" type="checkbox"/>

Qualification and Training	1, 2, 3, 4	DR, I	Clarification Request 4 Please provide evidence of training of local staff.	CL4	<input checked="" type="checkbox"/>
Remaining FARs from previous Verifications or Validation report					
<i>Remaining Requests from Previous Verifications</i>					
			The project validation and first verification are performed at the same time.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Data Management System

Description								
Structure of data management : description of all the different data collection systems								
TYPE	Name	Responsible	Procedure	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Inventory data from sampling plots	n/a	No name has been assigned to this task	No specific procedure has been provided on this issue	1, 2, 3, 4	DR, I	All relevant data is kept and stored. Corrective Action Request 2 Please provide a written description for data management procedures (raw data archiving, data transfer, data processing...) for inventory data and list the people responsible.	CAR2	<input checked="" type="checkbox"/>

*MoV = Mean of Verification, DR = Document Review, I = Interview,

GPS data	GPS device	No name has been assigned to this task	No specific procedure has been provided on this issue	1, 2, 3, 4	DR, I	<p>Clarification Request 5 Please provide the reference of the GPS devices used</p> <p>Corrective Action Request 3 Please provide a written description for data management procedures (raw data archiving, data transfer, data processing...) for GPS data and list the people responsible.</p>	CL5 CAR3	<input checked="" type="checkbox"/>
GIS		No name has been assigned to this task	No specific procedure has been provided on this issue	1, 2, 3, 4	DR, I	<p>Clarification Request 6 Please provide the reference of the GIS used.</p> <p>Corrective Action Request 4 Please provide a written description for data management procedures (raw data archiving, data transfer, data processing...) for GIS data and list the people responsible.</p>	CL6 CAR4	<input checked="" type="checkbox"/>

Raw Data Archiving and Protection measures

Name	Description of data archiving and protection measures	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Inventory data from sampling plots	The data archiving and protection measures of inventory data are described in the monitoring plan.	1, 2, 3, 4	DR,I	See Corrective Action Request 2	CAR2	<input checked="" type="checkbox"/>
GPS data	The data archiving and protection measures of GPS data are described in the monitoring plan.	1, 2, 3, 4	DR,I	See Corrective Action Request 3	CAR3	<input checked="" type="checkbox"/>
GIS	The data archiving and protection measures of GIS data are described in the monitoring plan.	1, 2, 3, 4	DR,I	See Corrective Action Request 4	CAR4	<input checked="" type="checkbox"/>

*MoV = Mean of Verification, DR = Document Review, I = Interview,

Data transfer						
Description of data transfer from raw data archiving to calculation tool						
Name	Description of data archiving and protection measures	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Inventory data from sampling plots	No procedure for transfer of inventory data and the responsible person was provided.	1, 2, 3, 4	DR,I	See Corrective Action Request 2	CAR2	<input checked="" type="checkbox"/>
GPS data	No procedure for transfer of GPS data and the responsible person was provided.	1, 2, 3, 4	DR,I	See Corrective Action Request 3	CAR3	<input checked="" type="checkbox"/>
GIS	No procedure for transfer of GIS data and the responsible person was provided.	1, 2, 3, 4	DR,I	See Corrective Action Request 4	CAR4	<input checked="" type="checkbox"/>

Data processing						
Description of data processing from transferred data to final results in the calculation tool						
Step	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Consistency	Process of data from the paper sheets used, entered into an Excel table, and entered into the Excel calculation file.	1, 2, 3, 4	DR,I	Consistency checks have been performed between the paper sheets and the Excel table, and between the Excel table "Data Inventory" and the Excel calculation file "Camara Version 01".	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Calculation Tool description	The calculation tool has been created by ONFI.	1, 2, 3, 4	DR,I	<p>Corrective Action Request 5 The calculation should not take into account the trees with DBH below 4,775 cm. Please correct the formula in the calculation tool in order to exclude these plants.</p> <p>Corrective Action Request 6 Please correct the number of plots in the monitoring plan.</p> <p>Corrective Action Request 7 Please correct the carbon fraction. The default value recommended in the methodology</p>	CAR5 CAR6 CAR7 CAR8	<input checked="" type="checkbox"/>

*MoV = Mean of Verification, DR = Document Review, I = Interview,

				should be used. Corrective Action Request 8 Palm trees should not be included in the calculation. Please correct the formula in the calculation tool in order to exclude palm trees.		
Transformation of data		1, 2, 3, 4	DR,I	See Corrective Action Request 2 See Corrective Action Request 3 See Corrective Action Request 4	CAR2 CAR3 CAR4	<input checked="" type="checkbox"/>
Elimination of not plausible data		1, 2, 3, 4	DR,I	Yearly measurements of the DBH values (instead of every 5 years) prevent not plausible data. See Corrective Action Request 2	CAR2	<input checked="" type="checkbox"/>
Default parameter and ex-ante data		1, 2, 3, 4	DR,I	See Corrective Action Request 7	CAR7	<input checked="" type="checkbox"/>
Rounding functions		1, 2, 3, 4	DR,I	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Calculation tool changes and protection measures		1, 2, 3, 4	DR,I	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Protocol Algorithms and Results

Description of data processing from transferred data to final results in the calculation tool

Step	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Methodology formulae	Formulae that should be used are given in the methodology.	1, 2, 3, 4	DR,I	The use of the formulae from the methodology is correct.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Describe the use and results of each formula in the calculation tool	Description of Ex-post actual net GHG removals	1, 2, 3, 4	DR,I	Corrective Action Request 9 Please precise the use of formulae in the MR, provide details of the calculation, and include a table with the final sequestration calculated.	CAR9	<input checked="" type="checkbox"/>

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Report any additional calculation used to obtain values used in the formulae	N/A	1, 2, 3, 4	DR,I	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Monitoring Plan Implementation

List of Parameter to be monitored							
ID-PDD	ID-MP	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
AP01		Area of the stratum P01	1, 2, 3, 4	DR,I	The monitoring of strata and stand boundaries has been done using a Geographical Information System (GIS), integrating data from GPS measurements and satellite imagery. Evolution of the area is checked every year on the field.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP02		Area of the stratum P02	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP03		Area of the stratum P03	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP04		Area of the stratum P04	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP05		Area of the stratum P05	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP06A		Area of the stratum P06A	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP06B		Area of the stratum P06B	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP07A		Area of the stratum P07A	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP07B		Area of the stratum P07B	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP08A		Area of the stratum P08A	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP08B		Area of the stratum P08B	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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AP08C		Area of the stratum P08C	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP09		Area of the stratum P09	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP10		Area of the stratum P10	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP11		Area of the stratum P11	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP12		Area of the stratum P12	1, 2, 3, 4	DR,I	See above Corrective Action Request 10 The area of Lairas should be withdrawn of the area of the stratum P12.	CAR10	<input checked="" type="checkbox"/>
AP13		Area of the stratum P13	1, 2, 3, 4	DR,I	See above. Corrective Action Request 11 The area of Lairas should be withdrawn of the area of the stratum P13.	CAR11	<input checked="" type="checkbox"/>
AP14		Area of the stratum P14	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP15		Area of the stratum P15	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP16		Area of the stratum P16	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP17A		Area of the stratum P17A	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP17B		Area of the stratum P17B	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP18		Area of the stratum P18	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP20A		Area of the stratum P20A	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AP20B		Area of the stratum P20B	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

AP20C		Area of the stratum P20C	1, 2, 3, 4	DR,I	See above.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Location of the permanent sample plots		Latitude and Longitude of the permanent sample plots	1, 2, 3, 4	DR,I	The position of the permanent sample plots is checked every year during the inventory of the plot. During the audit 16 sample plots positions have been verified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DBH		Diameter of tree at breast height (1.30m)	1, 2, 3, 4	DR,I	Since 2003, the DBH of all trees in all sample plots are measured every year. During the audit 16 sample plots have been verified. A deviation to the monitoring plan has been issued in this report regarding the measurement of only one stem on trees forking below 4 ½ feet.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
N cattle		Annual land renting contract	1, 2, 3, 4	DR,I	Corrective Action Request 12 The emission from the cattle should not be included in the monitoring.	CAR12	<input checked="" type="checkbox"/>

Monitoring Instrumentation

	Ref.	MoV*	Verification summary and comments	Draft Concl	Final Concl
<i>Inventory devices</i>					
Instrumentation information	1, 2, 3, 4	DR, I	The list of instrumentation devices has been included in the MP.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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Inspection Results During Verification	1, 2, 3, 4	DR, I	<p>Manner of execution: the inventory team is composed by Paulo Von Ryn and forestry workers.</p> <p>Functionality: The PSP are correct and allow getting the data required for monitoring.</p> <p>Quality assurance: Paulo Von Ryn is the team leader and in charge of the quality of data. He performs regular checking of forestry workers measurements.</p> <p>According to the monitoring plan, 10% of the inventory measurements should be independently verified by different personnel. During the audit, it has been revealed that this verification is not performed, and therefore can be considered as a deviation to the monitoring plan.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GPS					
Instrumentation Information	1, 2, 3, 4	DR, I	<p>Clarification Request 7 Provide the name and the uncertainty level of the GPS devices</p>	CL7	<input checked="" type="checkbox"/>
Inspection Results During Verification	1, 2, 3, 4	DR, I	The position of the sample plots given by the GPS during the audits were consistent with the position entered in the GIS. The instruments are state of the art.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sampling Information					
	Ref.	MoV*	Verification summary and comments	Draft Concl	Final Concl
Sample plots for monitoring of Project Activity					
Sampling principle and Methodology	1, 2, 3, 4	DR, I	The project area was stratified according to the tree species, spacing and age class. For each stratum the number of PSP was determined ex-ante to get the required accuracy of 10% with 95% level of confidence. Permanent plots are located using the approach of stratified random selection (PSP randomly selected in each stratum). The plots are identified in the field using a GPS. No bias was found in the installation of the PSP. The 4 corners are permanently marked. The numbering of trees is correct. The installation can be considered as good practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Frequency of sampling	1, 2, 3, 4	DR, I	All PSP are measured every year since 2003.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Training of sampling personnel	1, 2, 3, 4	DR, I	Clarification Request 8 Provide guideline on the training for field inventory.	CL8	<input checked="" type="checkbox"/>
Sample analyzed by	1, 2, 3, 4	DR, I	The leader of the inventory team is Paulo Von Ryn. He is assisted by forestry workers.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Certification of Analyzer / Laboratory:	1, 2, 3, 4	DR, I	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Methodology of Sampling Analysis	1, 2, 3, 4	DR, I	A deviation to the monitoring plan has been issued in this report regarding the measurement of only one stem on trees forking below 4 ½ feet (instead of measuring all the stems as requested in the MP).		<input checked="" type="checkbox"/>
Measurement Unit	1, 2, 3, 4	DR, I	See section 3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Measurement Range	1, 2, 3, 4	DR, I	See section 3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Uncertainty Level	1, 2, 3, 4	DR, I	The uncertainty level has been applied in the calculation of PSP per strata according to the tool "Calculation of the number of sample plots for measurements within A/R CDM project activities"	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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Archiving of Raw data	1, 2, 3, 4	DR, I	See section 2.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Inspection Results During Verification: Operation of Sampling					
Documentation	1, 2, 3, 4	DR, I	All inventory data are available on the original paper forms and digital forms.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Representativity	1, 2, 3, 4	DR, I	The sampling was conducted according to the monitoring plan.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reproducibility	1, 2, 3, 4	DR, I	Data are archived on paper and in excel files. The PSP were marked in the field and could be found easily from the road. The audit team verified the DBH measurements on the PSP in the field; the deviation was below 2 cm which considered sufficiently accurate quality for DBH measurement.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Accounting information					
	Ref.	MoV*	Verification summary and comments	Draft Concl	Final Concl
<i>Accounting Information: sale of wood products</i>					
Description of Accounted Component			NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Account Credible / in line with PDD			NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

External data

Not applicable

Others

Not applicable

Data verification

*MoV = Mean of Verification, DR = Document Review, I = Interview,

Internal review

See section 1.3

Usage of default value

See section 3.2

Reproducibility

See section 3.3.1

Peculiarities

Description of peculiarities and unexpected events during the verification period						
Issue	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Performance	Does the monitoring report include a statement about peculiarities (eg. Fire, floods, insect outbreaks, diseases, ect...)	1, 2, 3, 4	DR, I	Corrective Action Request 13 Please include a statement in the MR about peculiarities if occurred.	CAR13	<input checked="" type="checkbox"/>

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Reliability and Plausibility

Description of crosschecks and plausibility checks							
Issue	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl	
Performance	<p>Are the data in the calculation tool plausible (e.g. negative values, high/low values, implausible sequences of constant values)?</p> <p>What are the crosschecks applied to verify the provided emission reductions and/or the key parameter?</p>	1, 2, 3, 4	DR, I	<p>During on-site visit, the field sheet from 16 PSP has been reviewed and the highest value were reviewed by the audit team.</p> <p>The Excel File Camara has been reviewed by the audit team and the ex-post net anthropogenic GHG removals were verified.</p> <p>Corrective Action Request 14 In the Camara file, the formula of the average of the strata P17A is not correct as it does not include all the PSP values.</p>	CAR14	<input checked="" type="checkbox"/>	

*MoV = Mean of Verification, DR = Document Review, I = Interview,

Completeness and Correctness

Description of completeness and correctness							
Issue	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl	
Correctness	Are the data provided correct?	1, 2, 3, 4	DR, I	See Corrective Action Request 5 Corrective Action Request 6 Corrective Action Request 7 Corrective Action Request 8 Corrective Action Request 9 Corrective Action Request 10 Corrective Action Request 11 Corrective Action Request 12 Corrective Action Request 14	CAR5 CAR6 CAR7 CAR8 CAR9 CAR10 CAR11 CAR12 CAR14	<input checked="" type="checkbox"/>	
Completeness	Are the data provided complete?	1, 2, 3, 4	DR, I	See Corrective Action Request 1 Corrective Action Request 2 Corrective Action Request 3 Corrective Action Request 4 Corrective Action Request 9 Corrective Action Request 13 Corrective Action Request 15 Corrective Action Request 16 Clarification Request 1 Clarification Request 2 Clarification Request 3 Clarification Request 4 Clarification Request 5 Clarification Request 6 Clarification Request 7 Clarification Request 8	CAR1 CAR2 CAR3 CAR4 CAR9 CAR13 CAR15 CAR16 CL1 CL2 CL3 CL4 CL5 CL6 CL7 CL8	<input checked="" type="checkbox"/>	

*MoV = Mean of Verification, DR = Document Review, I = Interview,

Additional requirements

Description of additional requirements to be checked							
Issue	Description	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl	
Environmental issues	What are the environmental parameters monitored? Are these parameters included in the MR?	1, 2, 3, 4	DR, I	<p>According to the PDD the project is monitoring the biodiversity in the project area:</p> <ul style="list-style-type: none"> - Monitoring of superior vertebrates (Mammals and birds) - Monitoring of reptiles and amphibians - Monitoring of insects - Monitoring of tree species in plantation and natural forests <p>However, the monitoring of these parameters is not included in the monitoring plan and monitoring report.</p> <p>Corrective Action Request 15 Provide more information about the monitoring of these species in the monitoring plan and the monitoring report.</p>	CAR15	<input checked="" type="checkbox"/>	
Socio economic issues	What are the socio economic parameters monitored? Are these parameters included in the MR?	1, 2, 3, 4	DR, I	<p>The PDD mentions a monitoring of the socio-economic impacts. However, the monitoring of these parameters is not included in the monitoring plan and monitoring report.</p> <p>Corrective Action Request 16 Provide more information about the monitoring of socio-economic impacts of the project in the monitoring plan and the monitoring report.</p>	CAR16	<input checked="" type="checkbox"/>	

*MoV = Mean of Verification, DR = Document Review, I = Interview,

B. Table 2: Compilation and Resolutions of CARs, CLs and FARs

Corrective Action Requests by Audit Team	Summary of project owner response and follow-up from audit team	Final conclusion
<p>Corrective Action Request 1 Please precise the longitude of the project in the PDD</p>	<p>Project team 01/03/2011 :</p> <p>A modification related to this CAR was made in the section A.4.2 of the PDD. The modification gives the latitude and the longitude of the project area in the coordinate system of south America SAD 1969 UTM Zone 21S which is used in the GIS of the project. This modification is given additionally to the latitude and longitude of the fazenda that encompasses the VCS ARR project area.</p> <p>Auditor 28/03/2011 :</p> <p>The PDD has been modified as requested.</p>	<input checked="" type="checkbox"/>
<p>Clarification Request 1 Provide the procedure for monitoring the strata area and the sheets of field measurements.</p>	<p>Project team 01/03/2011 :</p> <p>Please refer to the QA/QC Manual.</p> <p>Auditor 28/03/2011 :</p> <p>The procedure to monitor strata area is not included in the QA/QC Manual. Please correct the QA/QC Manual.</p> <p>Project team 30/03/2011 :</p> <p>The procedure to monitor strata area is included in the QA/QC Manual (Procedure B of Protocol 15) but not referenced correctly. In consequence, some modifications in section 8.1.4 (p.67) and Protocol 15 (p.114 and p.115) of the QA/QC Manual were made to make the procedure related to the monitoring of strata area more evident. Some minor modifications were also made in Protocol 15 to be more specific on the type of satellite picture used.</p> <p>Auditor 13/04/2011 :</p> <p>The procedure for monitoring the strata area has been included in the QA/QC Manual.</p>	<input checked="" type="checkbox"/>

<p>Clarification Request 2 Please provide the contract between ONF and Peugeot SA over the sequestration rights.</p>	<p>Project team 01/03/2011 : See the attached document named "Contrat Peugeot ONF propriété des credits.pdf".</p> <p>Auditor 28/03/2011 : The information has been provided as requested.</p>	<input checked="" type="checkbox"/>
<p>Clarification Request 3 Please provide the Quality Management Manual</p>	<p>Project team 01/03/2011 : Please refer to the QA/QC Manual.</p> <p>Auditor 28/03/2011 : The QA/QC Manual has been provided.</p>	<input checked="" type="checkbox"/>

<p>Clarification Request 4 Please provide evidence of training of local staff.</p>	<p>Project team 01/03/2011 :</p> <p>Because of the nature of the project, which is a pioneer project dedicated in part to research activities, the training of local staff was made by a learning-by-doing approach.</p> <p>In the beginning of the project, the manger of ONF Brasil, as forest engineer, trained the local staff employed by the project for the activities related to site preparation (clearing, and use of herbicides), plantation and maintenance of forest plantations. For the activities of nursery, the local staff employed by the project was trained by Floresta Viva, owner of the nursery of the project in Juruena.</p> <p>For other activities, practical demonstrations and trainings are made by the experts and scientists coming to the fazenda for specific issues. This was done for as social studies, with the NGO Pro-Natura and ONF Brasil during the program of donation of seedlings (technical assistance), and for monitoring of flora and fauna, with scientists and students from Universities (UFMT, University of Sao Paulo, University of Montpellier, etc.) and from Research centers (CIRAD, IRD).</p> <p>However, for some specific issues, more formal trainings were made. This includes:</p> <ul style="list-style-type: none"> - Training on GIS for the team of ONF Brasil (Estrade, 2002 - see attached file). - Training on carbon monitoring at monitoring event in 2003 (Georges, 2003 - see attached file) and 2009 <p>The two references mentioned above are: Estrade, C., 2002. Mise en place d'un système d'information géographique pour le projet "Puits de carbone PSA - ONF - IPN". F. d. I. F. Mémoire de fin d'études, Promotion 1999-2002. Nancy, Formation d'Ingénieurs Forestiers. Mémoire de fin d'études, promotion 1999-2002 Georges L., 2003. Mission d'appui au projet ONF.Peugeot. Fazenda São Nicolau – Mato Grosso – Brésil. ONF International. 42 p.</p> <p>Auditor 28/03/2011 :</p> <p>The provided references shows that training of local staff have been performed on carbon monitoring and the use of the GIS.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 2 Please provide a written description for data management procedures (raw data archiving, data transfer, data processing...) for inventory data and list the people responsible.</p>	<p>Project team 01/03/2011 :</p> <p>Please refer to the QA/QC Manual</p> <p>Auditor 28/03/2011 :</p> <p>The information requested in included in the QA/QC Manual which has been provided.</p>	<input checked="" type="checkbox"/>

<p>Clarification Request 5 Please provide the reference of the GPS devices used</p>	<p>Project team 01/03/2011 :</p> <p>Two GPS devices are used in the fazenda: the model GPSMAP 60CSx and the model GPS 12XL, both from the trademark Garmin.</p> <p>Auditor 28/03/2011 :</p> <p>The information has been provided as requested. The instruments are state of the art.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 3 Please provide a written description for data management procedures (raw data archiving, data transfer, data processing...) for GPS data and list the people responsible.</p>	<p>Project team 01/03/2011 :</p> <p>Please refer to the QA/QC Manual</p> <p>Auditor 28/03/2011 :</p> <p>The information requested in included in the QA/QC Manual which has been provided.</p>	<input checked="" type="checkbox"/>
<p>Clarification Request 6 Please provide the reference of the GIS used.</p>	<p>Project team 01/03/2011 :</p> <p>The GIS used for the project is ArcGIS in its version 8.1 from ESRI (Estrade, 2002) See in attached file: Estrade, C., 2002. Mise en place d'un système d'information géographique pour le projet "Puits de carbone PSA - ONF - IPN". F. d. I. F. Mémoire de fin d'études, Promotion 1999-2002. Nancy, Formation d'Ingénieurs Forestiers. Mémoire de fin d'études, promotion 1999-2002</p> <p>Auditor 28/03/2011 :</p> <p>The information has been provided as requested.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 4 Please provide a written description for data management procedures (raw data archiving, data transfer, data processing...) for GIS data and list the people responsible.</p>	<p>Project team 01/03/2011 :</p> <p>Please refer to the QA/QC Manual</p> <p>Auditor 28/03/2011 :</p> <p>The information requested in included in the QA/QC Manual which has been provided.</p>	<input checked="" type="checkbox"/>

<p>Corrective Action Request 5 The calculation should not take into account the trees with DBH below 4,775 cm. Please correct the formula in the calculation tool in order to exclude these plants.</p>	<p>Project team 01/03/2011 :</p> <p>The assertion made by the DOE was taken in consideration and the following modification were made in accordance with this assertion:</p> <ul style="list-style-type: none"> - Modification of the annex file "CAMARA_E1_Core_v1.0_Data2009.xls" to the modified annex file "CAMARA_E1_Core_v1.1_Data2009.xls" <p>Auditor 28/03/2011 :</p> <p>The formula does not include a correction of the DBH. Consequently, some DBH below 4.775 cm are still included in the reporting. Please correct the formula.</p> <p>Project team 30/03/2011 :</p> <p>The assertion made by the DOE was taken in consideration by modifying the formula in the calculation of AGB in the sample plots. In consequence, the final results were modified in the monitoring report :</p> <ul style="list-style-type: none"> - Modification of the annex file "CAMARA_E1_Core_v1.1_Data2009.xls" to the modified annex file "CAMARA_E1_Core_v1.21_Data2009.xls" - Modification of the annex file "Monitoring_Report_PCPO_V1.1.doc" to the modified annex file "Monitoring_Report_PCPO_V1.2.doc" <p>Auditor 13/04/2011 :</p> <p>The formula has been properly corrected. The ex-post GHG removals calculations are correct.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 6 Please correct the number of plots in the monitoring plan.</p>	<p>Project team 01/03/2011 :</p> <p>The modification related to this CAR was made in section 3 of the monitoring plan (p.9). This modification takes in consideration the others CARs made by the DOE as the changes in the project area on stratum 12 and stratum 13. Therefore the final calculation is 191 sample plots.</p> <p>Auditor 28/03/2011 :</p> <p>The calculation of the number of plots has been corrected as requested.</p>	<input checked="" type="checkbox"/>

<p>Corrective Action Request 7 Please correct the carbon fraction. The default value recommended in the methodology should be used.</p>	<p>Project team 01/03/2011 :</p> <p>The assertion made by the DOE was taken in consideration and the following modifications were made in accordance with this assertion: Modification of the annex file "CAMARA_E1_Core_v1.0_Data2009.xls" to the modified annex file "CAMARA_E1_Core_v1.1_Data2009.xls" Modification of the section 5.A of the Monitoring report. See attached file "Monitoring-Report_PCPO.V1.1.doc".</p> <p>Auditor 28/03/2011 :</p> <p>The carbon fraction has been corrected as requested in the excel file and in the monitoring report.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 8 Palm trees should not be included in the calculation. Please correct the formula in the calculation tool in order to exclude palm trees.</p>	<p>Project team 01/03/2011 :</p> <p>The assertion made by the DOE was taken in consideration by not considering "babaçu" (palm trees) and the following modification were made in accordance with this assertion: Modification of the annex file "CAMARA_E1_Core_v1.0_Data2009.xls" to the modified annex file "CAMARA_E1_Core_v1.1_Data2009.xls"</p> <p>Auditor 28/03/2011 :</p> <p>In the sample 3, 13 of the strata 21, babaçu values have not been excluded. Please correct these values.</p> <p>Project team 30/03/2011 :</p> <p>The assertion made by the DOE was taken in consideration and the following modification were made in accordance with this assertion: Modification of the annex file "CAMARA_E1_Core_v1.1_Data2009.xls" to the modified annex file "CAMARA_E1_Core_v1.2_Data2009.xls"</p> <p>Auditor 13/04/2011 :</p> <p>All the measurements of babaçu have been deleted from the calculation file.</p>	<input checked="" type="checkbox"/>

<p>Corrective Action Request 9 Please precise the use of formulae in the MR, provide details of the calculation, and include a table with the final sequestration calculated.</p>	<p>Project team 01/03/2011 : The modification regarding this CAR was made in the section 1, 5.A and 9.C of the monitoring report.</p> <p>Auditor 28/03/2011 : The Monitoring report has been modified as requested.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 10 The area of Lairas should be withdrawn of the area of the stratum P12.</p>	<p>Project team 01/03/2011 : The modification regarding this CAR was made in the section 3.B of the monitoring report, and in the CAMARA file. See the modified files "Monitoring_Report_PCPO_V1.1.doc" and "CAMARA_E1_Core_v1.1_Data2009.xls"</p> <p>Auditor 28/03/2011 : An area of 2.71 ha has been withdrawn from the area of the stratum P12.</p>	<input checked="" type="checkbox"/>

<p>Corrective Action Request 11 The area of Lairas should be withdrawn of the area of the stratum P13.</p>	<p>Project team 01/03/2011 :</p> <p>The modification regarding this CAR was made in the section 3.B of the monitoring report, and in the CAMARA file. See the modified files "Monitoring_Report_PCPO_V1.1.doc" and "CAMARA_E1_Core_v1.1_Data2009.xls"</p> <p>Auditor 28/03/2011 :</p> <p>An area of 3.38 ha has been withdrawn from the area of the stratum P13.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 12 The emission from the cattle should not be included in the monitoring.</p>	<p>Project team 01/03/2011 :</p> <p>The assertion made by the DOE was taken in consideration by not considering emissions reductions from sylvopastoral activities. In consequence, modifications were made in the sections 2.B and 10.C of the Monitoring report. See attached file "Monitoring-Report_PCPO.V1.1.doc"</p> <p>Auditor 28/03/2011 :</p> <p>The emissions from the cattle have not been included in the monitoring as requested.</p>	<input checked="" type="checkbox"/>

<p>Clarification Request 7 Provide the name and the uncertainty level of the GPS devices</p>	<p>Project team 01/03/2011 :</p> <p>Two GPS devices are used in the fazenda : the model GPS 12XL and, more recently, the model GPSMAP 60CSx, both from the trademark Garmin The manuals of the GPS devices state a precision of 15m for the first, and a precision <10m at 95% for the second. See attached files: - GPS12XL_OwnersManual.pdf - GPSMAP60CSx_OwnersManual.pdf</p> <p>However, at project start the Brazilian company Aquarius realized the cartography of the project area by using a differential GPS device (geodesic GPS): a fixed GPD base was installed in the head office of the fazenda in order to correct the data from the GPS device used for measurements. This allowed increasing the precision to one meter (Estrade, 2002 in attached file). Nevertheless, when the cartography was exported from Autocad, the software used by the company Aquarius, to the project GIS, some difficulties of file conversions occur and led finally to a precision of 5-10 meters. Estrade, C., 2002. Mise en place d'un système d'information géographique pour le projet "Puits de carbone PSA - ONF - IPN". F. d. I. F. Mémoire de fin d'études, Promotion 1999-2002. Nancy, Formation d'Ingénieurs Forestiers. Mémoire de fin d'études, promotion 1999-2002</p> <p>Auditor 28/03/2011 :</p> <p>The information has been provided as requested.</p>	<input checked="" type="checkbox"/>
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<p>Clarification Request 8 Provide guideline on the training for field inventory</p>	<p>Project team 01/03/2011 : Please refer to the QA/QC Manual.</p> <p>Auditor 28/03/2011 : The QA/QC Manual does not include a guideline on the training for field inventory.</p> <p>Project team 30/03/2011: The QA/QC Manual has been modified.</p> <p>Auditor 14/04/2011 : The QA/QC Manual includes the required information regarding the training for field inventory.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 13 Please include a statement in the MR about peculiarities if occurred.</p>	<p>Project team 01/03/2011 : A modification related to this CAR was made in the section 12 of the monitoring report (p.22). The modification was made to detail the occurrence of an attack of the tree species Simaruba amara by an insect named Onchoscelis germani. A new reference, in attached file, was used for this CAR: Gadette Y-M et Assumpção V., 2004. Vème Comité Scientifique Consultatif. Projet « Puits de Carbone Peugeot ». ONF Brasil. 106p.</p> <p>Auditor 28/03/2011 : The monitoring report has been modified as requested.</p>	<input checked="" type="checkbox"/>

<p>Corrective Action Request 14 In the Camara file, the formula of the average of the strata P17A is not correct as it does not include all the PSP values.</p>	<p>Project team 01/03/211 :</p> <p>The assertion made by the DOE was taken in consideration and the following modification were made in accordance with this assertion: Modification of the annex file "CAMARA_E1_Core_v1.0_Data2009.xls" to the modified annex file "CAMARA_E1_Core_v1.1_Data2009.xls"</p> <p>Auditor 28/03/2011 :</p> <p>The excel file has been modified as requested.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 15 Provide more information about the monitoring of these species in the monitoring plan and the monitoring report.</p>	<p>Project team 01/03/2011 :</p> <p>A modification related to this CAR was done in section 11 of the monitoring plan (p.17) and in section 12 of the monitoring report.</p> <p>Auditor 28/03/2011 :</p> <p>The monitoring report has been modified as requested.</p>	<input checked="" type="checkbox"/>
<p>Corrective Action Request 16 Provide more information about the monitoring of socio-economic impacts of the project in the monitoring plan and the monitoring report.</p>	<p>Project team 01/03/2011 :</p> <p>A modification related to this CAR was done in section 10 of the monitoring plan (p.16) and in section 13 of the monitoring report.</p> <p>Auditor 28/03/2011 :</p> <p>The monitoring report has been modified as requested.</p>	<input checked="" type="checkbox"/>

C. VCS Risk Assessment Checklist

The risk assessment is based on the initial risk assessment at the validation, because the validation and the first verification have been performed at the same time. For more information about the VCS risk assessment protocol, please refer to the validation report.

Annex 2: Information Reference List

Ref	Document or Type of Information			
1	Interviews			
	Name	First name	Organisation	
	Arruda	Cleide	ONF Brasil.	
	Assumpção	Vespasiano	IBAMA	
	Fachini	Eliani	SEMA / Superintendencia de Biodiversidade	
	Silveira	Roberto	ONF Brasil.	
	Von Ryn	Paulo	ONF Brasil.	
	Von Ryn	Valeria	ONF Brasil.	
	Moraes	Raquel	Ex- ONF Brasil.	
	Paulino	Edivaldo	SETA Contabilidade	
	Stoffel	Roberto	Assentamento P.A. Juruena Associação Vale Verde	
		Geraldo	Presidente Associação Vale Verde	
		Neia	Presidente da Associação das Mulheres Virtuosas	
		Maranhao	Presidente da Associação da Linha 9	
		Ailton	Presidente da Associação da Linha Vieira	
		Campos	Arnaldo	Municipality of Contriguaçu
		Teixeira	Roberto	Municipality of Juruena
	Braedkoski Lima	Vanir Helvio	Municipality of Juruena	
	Nunes	Paulo	Ex- ONG Pro Natura / PNUD	
	Dufour	Thomas	ONF International	
Giraud	Adeline	ONF International		
Gardette	Yves Marie	ONF International		
2	Project Description			
3	Monitoring Plan			
4	Monitoring Report			
5	Camara excel file			
6	QA/QC Manual			
7	Georges L., 2003. Mission d'appui au projet ONF.Peugeot. Fazenda São Nicolau – Mato Grosso – Brésil. ONF International. 42 p.			

8	Estrade, C., 2002. Mise en place d'un système d'information géographique pour le projet "Puits de carbone PSA - ONF - IPN". F. d. I. F. Mémoire de fin d'études, Promotion 1999-2002. Nancy, Formation d'Ingénieurs Forestiers. Mémoire de fin d'études, promotion 1999-2002.
9	Reference of the GPS 1: model GPSMAP 60CSx, Garmin.
10	Reference of the GPS 2: model GPS 12XL, Garmin.
11	Field notes of the audit team
12	List of all the parcels, with GPS measurements
13	Map of verified parcels
14	Sample plots localization
15	« Accord projet Puits de Carbone au Brésil »