

THE ENVIRA AMAZONIA PROJECT – A TROPICAL FOREST CONSERVATION PROJECT IN ACRE, BRAZIL



Document Prepared By: Environmental Services, Inc.

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Summary:

Environmental Services, Inc., (ESI) was contracted by CarbonCo, LLC, on 11 March 2015 to conduct the Verification of The *Envira Amazonia Project: A Tropical Forest Conservation Project in Acre, Brazil*. The Envira Amazonia Project follows the framework of Reducing Emissions from Deforestation and Degradation (REDD) and is achieving Greenhouse Gas (GHG) emission reductions as well as tropical forest protection and conservation through payments for ecosystem services. This project has been developed in conjunction with the Climate, Community and Biodiversity Standard (CCBS). Proposed project activities involved engaging a large landowner willing to forego ranching for conversion of forest land, working with the local communities surrounding the project area, engaging Acre state officials working on reducing deforestation pressures on the regional/state level, and putting into operation the REDD project implementation plan with the help of local partners.

The verification process employed by ESI utilized an internal guiding framework and specifically incorporated VCS documents and ISO 14064-3 to develop and implement a Verification & Sampling Plan. The Verification team assessed the Envira Amazonia Project's compliance under the Verified Carbon Standard (VCS) Version 3 (and all associated updates), the selected methodology, and the Project Description. This verification assessed the GHG emission removals through Agriculture, Forestry and Other Land Use (AFOLU) criteria, specifically, REDD – Avoided Planned Deforestation (REDD-APD) activities.

The scope of the verification included the GHG project implementation status; physical infrastructure, activities, technologies as well as processes outlined in the validated PD of the Envira Amazonia Project; GHG sources, sinks and/or reservoirs; types of GHG's; and time periods covered. The geographic verification scope was defined by the project boundaries, the carbon reservoir types, management activities, growth and yield models, the inventory program, and contract periods. The verification covered a total of 39,300.6 ha of REDD-APD over the Monitoring Period.

The verification criteria followed the guidance documents provided by VCS and included the following: VCS Standard (25 March 2015, v3.5), VCS Program Guide (08 October 2013, v3.5), Program Definitions (08 October 2013, v3.5), AFOLU Requirements (08 October 2013, v3.4), AFOLU Non-Permanence Risk Tool (4 October 2012, v3.2), and the VCS Methodology VM0007: "REDD Methodology Modules (REDD-MF)" v1.5 (09 March 2015) and its associated modules and tools.

A summary of all findings is included in Appendix B. There are no restrictions of uncertainty.

ESI here confirms all verification activities including objectives, scope and criteria, level of assurance, monitoring and project documentation adherence to VCS Version 3 and all associated updates as documented in this report are complete. ESI concludes without any qualifications or limiting conditions that the 2014 Envira Amazonia Project Monitoring Report dated 02 February 2016 (v1.0) meets the requirements of VCS Version 3 and all associated updates.

The GHG assertion provided by CarbonCo and verified by ESI has resulted in the GHG emissions reduction or removal of 5,460,695 tCO₂ equivalents by the project during the verification

period/reporting period (02 August 2012 – 31 December 2014). This value is gross of the 23% (1,530,771 tCO₂ equivalents) buffer withholding based on the non-permanence risk assessment tool. This results in 3,929,924 tCO₂ equivalents of credits eligible for issuance as VCUs.

TABLE OF CONTENTS

1	Introduction	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of Assurance.....	6
1.4	Summary Description of the Project	6
2	Verification Process	6
2.1	Method and Criteria.....	6
2.2	Document Review	8
2.3	Interviews	9
2.4	Site Inspections.....	16
2.5	Resolution of Findings.....	17
2.5.1	Forward Action Requests	18
2.6	Eligibility for Validation Activities	18
3	Validation Findings.....	18
3.1	Participation under Other GHG Programs	18
3.2	Methodology Deviations.....	18
3.3	Project Description Deviations	20
3.4	Grouped Project	20
4	Verification Findings.....	20
4.1	Project Implementation Status	20
4.2	Accuracy of GHG Emission Reduction and Removal Calculations	20
4.3	Quality of Evidence to Determine GHG Emission Reductions and Removals	31
4.4	Non-Permanence Risk Analysis.....	31
5	Verification conclusion	38
	Appendix A – Documents Received/Reviewed	40
	Appendix A – NCRs/CL/OFs.....	44

1 INTRODUCTION

1.1 Objective

CarbonCo, LLC (Project Proponent) commissioned Environmental Services, Inc., (ESI) (Verifier) to conduct the first monitoring period verification of emissions reductions from planned deforestation for the *Envira Amazonia Project* registered under the Verified Carbon Standard (VCS). The project category is Reducing Emissions from Deforestation and Degradation (REDD), specifically “VM0007 REDD Methodology Modules”, and framework for activities related to Avoided Planned Deforestation (APD) within project scope 14: Agriculture, Forest and other Land Use (AFOLU) Requirements for the verification period beginning on 02 August 2012 and ending on 31 December 2014. The Verification objective of the *Envira Amazonia Project* included an assessment of compliance with the VCS Program Guide, VCS Standard, AFOLU Requirements, and the likelihood that implementation of the planned GHG project will result in the GHG emissions reductions/removal as stated by the Project proponent (ISO 14064-3:2006).

1.2 Scope and Criteria

The scope of a verification generally includes the GHG project’s implementation and baseline scenarios; physical infrastructure, activities, technologies and processes of the GHG project; GHG sources, sinks and/or reservoirs; types of GHG’s; time periods covered; and adherence to the validated PD. The geographic verification scope is defined by the project boundary, the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods. The scope of the *Envira Amazonia Project* was outlined by the Project Proponent within the validated Project Description and Monitoring Plan and is re-defined as follows for the GHG emissions reduction/removals project:

Baseline Scenario	Planned deforestation - conversion to large-scale cattle ranches (forest clearing followed by the establishment of managed pasture) Agents of deforestation – the project proponent/landowner.
Activities/Technologies/Processes	Avoided planned deforestation – utilizing VM0007 v1.5
Sources/Sinks/Reservoirs	• Above ground live tree biomass • Below ground live tree biomass • Dead wood • Harvested wood products
GHG Type	CO ₂ – Sinks; CH ₄ and N ₂ O - Source
Time Period (state date, crediting period, verification period)	Start Date: 02 August 2012 First Monitoring Period: 02 August 2012 – 31 December 2014
Project Boundary	Project Area: 39,300.6 hectares Project Property: 200,000 hectares Privately-owned land in Acre, Brazil. Project seeks to conserve the entire property, but the

	Project activities will specifically focus on the subset Project Area of 39,300.6 hectares.
GHG reduction and/or removal	5,460,695 tCO ₂ e

1.3 Level of Assurance

The level of assurance was used to determine the depth of detail that the Verifier placed in the Verification and Sampling Plan to determine if there are any errors, omissions, or misrepresentations (ISO 14064-3:2006). ESI assessed the project's implementation of general principles, data collection and processing, sampling descriptions, documentation, *ex post* calculations, etc., to provide *reasonable assurance* to meet the Project Level requirements of the VCS Program. Based on the verification findings, a final evaluation statement reasonably assures that the project GHG representations are materially accurate. The evidence used to achieve a reasonable level of assurance is specified in the following sections.

1.4 Summary Description of the Project

The *Envira Amazonia Project* was initiated by CarbonCo, LLC to protect and conserve tropical forest in the state of Acre, Brazil by providing payments for ecosystem services. This type of project is known as a Reducing Emissions from Deforestation and forest Degradation project (REDD project). This project is being developed and registered under the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity Standard (CCB). Project development involved engaging a large landowner willing to forgo conversion of forest land to a ranching operation, working with the local communities surrounding the project area, engaging Acre state officials working on reducing deforestation pressures on the regional/state level, and putting into operation the REDD project implementation plan with the help of local partners.

The *Envira Amazonia Project* will generate GHG emission reductions by foregoing forest conversion to grassland in favor of conservation of the tropical forest (i.e., maintaining existing carbon stocks). The project will also mitigate deforestation pressures in the wider region using a combination of environmental programs and social programs intended to improve the livelihoods of community members living in the vicinity of the project area. Social projects and programs for the local communities will not only generate sustainable economic opportunities, but will also result in a reduction in deforestation in the region and the preservation of biodiversity.

The *Envira Amazonia Project* is located near Feijó in Acre, Brazil. The property where the project area is located covers an area of 200,000 hectares. Feijó, the closest town to the Envira Amazonia Project, is located between the towns of Sena Madureira and Cruzeiro do Sul along Highway BR-364. The recent paving of Highway BR-364, the main east-west highway in Acre, in 2011 has greatly increased market access in the region and increased property values as a cattle ranching along this road corridor has expanded. The project property is connected to BR-364 by a secondary road and is accessible by 4-wheeler paths found throughout the property.

2 VERIFICATION PROCESS

2.1 Method and Criteria

According to the ISO14064-3, the Verification criteria are the “policy, procedure or requirement used as a reference against which evidence is compared”. Therefore, Verification of the selected methodology (VM0007, v1.5) and reported project results were measured for compliance against the following criteria:

- VCS Standard (v3.5, 25 March 2015)
- VCS Program Guide (v3.5, 08 October 2013)
- VCS Program Definitions (v3.5, 08 October 2013)
- VCS Agriculture, Forestry and Other Land Use (AFOLU) Requirements (v3.4, 08 October 2013)
- VCS AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2)
- VM0007 - REDD+ Methodology Framework: REDD-MF (09 March 2015, v1.5)
- Carbon pool modules:
 - CP-AB “VMD0001 Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools”, version 1.1
 - CP-W “VMD0005 Estimation of carbon stocks in the long-term wood products pool”, version 1.1
 - CP-D, “VMD0002 Estimation of carbon stocks in the dead-wood pool,” Version 1.0
- Baseline module:
 - BL-PL “VMD0006 Estimation of baseline carbon stock changes and greenhouse gas emissions from planned deforestation”, version 1.2
- Leakage modules:
 - LK-ASP “VMD0009 Estimation of emissions from activity shifting for avoided planned deforestation”, version 1.1
 - LK-ME “VMD0011 Estimation of emissions from market-effects”. Mandatory where the process of deforestation involves timber harvesting for commercial markets, version 1.0
- Monitoring module:
 - o M-MON “VMD0015 Methods for monitoring of greenhouse gas emissions and removals”, version 2.1.
- Miscellaneous Modules:
 - o E-BB “VMD0013 Estimation of greenhouse gas emissions from biomass burning”, v1.0.
 - o X -STR “VMD0016 Methods for stratification of the project area”, version 1.0.
 - o X-UNC “VMD0017 Estimation of uncertainty for REDD project activities”, version 2.0.
- Tools:
 - o T-SIG, CDM tool “Tool for testing significance of GHG emissions in A/R CDM project activities,” Version 1.0
 - o T-ADD, “VT0001 Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities,” Version 3.0
 - o T-BAR, “Tool for AFOLU non-permanence risk analysis and buffer determination,” Version 3.2
- Validated PDD

Also Assessed as Criteria of the CCBA Review (discussed in accompanying CCB Verification Report):

- *CCBA Project Design Standards (Third Edition, December 2013)*
- *Rules for the Use of the Climate, Community & Biodiversity Standards, Version December 2013*
- *Guidance for the Use of the CCB Standards, May 2014*

A project-specific Verification and Sampling Plan was developed to guide the verification auditing process to ensure efficiency and effectiveness. The purpose of the Verification and Sampling Plan was to present a risk assessment for determining the nature and extent of verification procedures necessary to ensure the risk of auditing error was reduced to a reasonable level. The Verification and Sampling Plan methodology was derived from all items in our verification process stated above. Specifically, the sampling plan utilized the VCS guidance documents and ISO 14064-3. Any modifications applied to the Verification and Sampling Plan were made based upon the conditions observed for monitoring in order to detect the processes with highest risk of material discrepancy.

Field sampling and techniques were based on the project parameters/scope and best professional judgment of the verification team in order to meet a reasonable level of assurance as directed by the professional judgment of the Lead Verifier. Because the biomass inventory was validated and has not changed, inventory plots were not selected for detailed review/re-measurement. Rather, for this verification, the site visit included an aerial survey of 100% the project area and leakage areas to aid the Verification Team in establishing a reasonable level of assurance regarding confirming the reported areas of *ex post* disturbance (from the remote sensing analysis) for the quantification of project emissions and leakage emissions.

In addition, a risk-based approach was used for the on-the-ground field sampling effort in order to select key areas for direct observation of forest losses, leakage issues, and stated project activities. Approximately 5 to 10% of the Project Area was toured in order to allow the Verification Team to establish a reasonable level of assurance regarding the implementation of project activities, and to further confirm the reported areas of *ex post* disturbance. Activity-shifting leakage was tracked by reviewing monitoring and remote sensing analysis of areas of deforestation across all lands outside of the project area owned or under management by the baseline agent.

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with, and identify any deviation from; VCS Program requirements, the methodological modules, and the validated Project Description (PD) document. The process of Verification involved one (1) formal round of assessment by the Verification team and resulted in a PD which was in conformance with VCS Rules. Desk review included an examination of the project details, data and parameters, and quantification of GHG emission reductions and removals. Documents reviewed included data used to set the baseline, carbon rights contracts, economic analysis, maps and aerial images, biomass and carbon calculation spread sheets. Modifications to the Verification and Sampling plan were made based upon the conditions observed in order to detect the processes with highest risk of material discrepancy.

The AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2) was used by the Project Proponent to assess overall project risk. The Verification Team reviewed the Non-Permanence Risk Report provided with the verification supporting documentation and confirmed that the Project adheres to the requirements set out in the VCS AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2). Each risk factor was thoroughly assessed for conformance. Any identified NCR and/or CL findings related to the AFOLU Non-Permanence Risk Tool/Report are presented in Appendix B. The final score was calculated to be 23%.

For a listing of all documents received from the client for this verification, please see Appendix A.

2.3 Interviews

The objective of the interview process was to solicit important information from personnel related to the project and relevant to the Verification process. Onsite interviews and informal discussions were conducted with project staff, members and leaders of the local communities, and Acre state government representatives. The interviews were performed by the Verification team on-site (within the project area, in Rio Branco, and Feijó Brazil), and the following is a list of the main interviewees:

Name	Title
Duarte Jose do Couto Neto	This individual and his wife own the Envira Project land. Mainly discussed progress of project since validation, and potential of activity shifting leakage to other lands owned by Duarte (also the agent of deforestation). He was happy with the project and full of expectations because they have passed validation. He highlighted benefits that have been distributed (medical kits, purchased boat, and intends to grant land title to community members but is waiting for carbon revenue to pay legal fees associated with titling). If this works out he wants to have other projects on his other ownerships. He has 157,000ha in Boca do Acre that he would like to start a carbon project on. We discussed the potential of activity shifting leakage on his other ownerships. He said he had not actively harvested land during the reporting period. During the interview process he states, <i>"He has not changed management in any of his other ownerships as a result of the project. He wants to see now if this type of project is economically viable. He has not cleared any land on any of his other ownerships between 2012 to 2014 to expand cattle operations. In the Envira project he has also not cleared any land."</i>
Rege Ever C. Vasques	Lawyer for the project. He was interviewed during the Validation concerning the LAR process. For the

	verification he was asked about progress of the project during the reporting period. He generally thought the project was progressing smoothly, and there were no unforeseen roadblocks since listing. He was positive and wanted to establish more projects in the area if possible.
Merla Albuquerque (Mayor of Feijo)	Mayor of Feijo. We discussed if he was familiar with the project and if he had been in contact with project proponents during the verification period. Also discussed if the city of Feijo has any municipal projects (such as new road construction) that could negatively affect project success and increase unplanned deforestation. Also discussed benefits distributed to community members and if he thought these were additional (or would have occurred in the absence of the project). He was relatively familiar with the project. He had seen a copy of the Project report, and the environmental secretary has a copy as well. He stated that the city's debt exceeds their income and would likely have no expansion in the foreseen future that could impact the project area. Additionally stated that a highway was just completed in the region, but it is approximately 12 kilometers from the project area. He did mention some doctors visiting a bridge (somewhat near the project area), and that some benefits were available to community members, though it sounded like these benefits were never distributed in the actual project area but a two day boat ride from the actual ownership.
Ayri Saraiva Rando	Cultural expert for the project. He conducted the initial survey of the project. We wanted to confirm that he had visited all of the families listed on the survey results supplied to the verification team. We also wanted to confirm that no native populations live within the project area.

	He confirmed visiting all ten families within the project area, and also visited 31 outside the project area (on the Envira River). He confirmed that there are no indigenous communities living within the project area. None were mentioned by community members when he did his interviews. He does know of some indigenous communities along the Envira river, which were not bordering the CCB leakage belt. He was aware of two, the Kaxinawa, and Ashaninka indigenous communities located further along the Envira river.
Professor Antonio Willian Flores	The professor served in helping to obtain satellite image data for the project. Also discussed deforestation monitoring, and methodologies used for monitoring. To monitor deforestation he uses states (Acres) methodologies' and data on monitoring of deforestation. Data is reviewed by himself and Jamie (Terra Carbon) and audited for inconsistencies. We also discussed some recent deforestation that was observed during the site visit to understand more about if these should or should not have been included in the monitoring period (we could smell smoke onsite, so we assumed they were recently cleared). He stated normally, the land is cleared in July in August, and the burnings take place in September, but this year the burning happened a bit later. It's uncommon to wait longer than a year. It is not common for someone to clear land and wait up to a year to burn it, so the data point we visited was likely cleared recently and not part of the monitoring period. Also discussed the potential for community members to have been re-located if the project did not take place (and the project area was converted to a cattle ranch as described in the baseline). He thought expansion would have been likely and that most land owners

	evacuate land before development. We also discussed hiring practices, how he was hired by CarbonCo and whether he had been made aware of his rights as a worker, and sexual harassment policies. He signed a contract, and this was all explicitly explained (so he was informed).
Igor Agapejev	Employee for TECMAN, the forestry company that performed carbon inventory measurements for the project area. Verifiers confirmed hiring and safety practices. Additionally, the Verifiers confirmed inventorying procedures used in the field and related to dead wood collection and QA/QC procedures. Igor is a manager in the office and described in detail the QA/QC procedures used: He worked on data processing aspect of the inventory. His trained team went to the field and collected data and did species assessments (observed during validation). He described his QA/QC process where he checks field data for entry errors. His error checking was to send errors to Jamie (from Terra Carbon) to look at clustering of data and trends. If errors are identified, field crew would be contacted to correct any data that did not make sense. He did not identify any systematic errors during review. Field crews were also trained (twice) on error checking and re-measurement of errors. To check some plots two teams would measure the same plots in a cluster to ensure measurement consistency.
Jose Aurimar Tavares Carneiro (aka "Mazinho")	Onsite project manager. Discussed hiring practices, and project activities that have already begun and project activities that are likely to occur in the next year. He stated that he grew up near the area and has been involved historically in the area. He performed the GPS work for the delineation of the project boundary in 2003 for the CAR. He stated that the people within the project area are excited for

	the project. Some medical and dental kits have been distributed to communities, and a boat was purchased. No one has yet to receive legal land title, but he has visited community members to discuss the project and related benefits.
James Eaton	TerraCarbon employee, consultants working with CarbonCo. In the development of the PDD and project technical aspects of monitoring. Jamie was contacted in multiple meetings to explain image analysis and other monitoring calculations.
Lelo Freitas	Representative, Freitas International Group, LLC. (Carbon Securities)/Project Facilitator. We discussed his role in the project which appeared to be coordinating activities with local groups such as the mayor and translating. He said there was little difference between landowner communications among the CarbonCo projects they have worked on in the past.
Brian McFarland	Director for the company CarbonCo., the project developer. He discussed his part in the project and his role as a project developer. He also discussed progress of the project since validation, and answered many technical questions related to company structure and agreements with the landowner, CCBA indicators, and what contact has been made with local authorities.
Jose Ferreira de Soza Raimundo Cunha Dimas de Silva Jose Magalhaes da Silva Fransisco Cirlandio Dimas de Sousa Samuel Souza da Silva Jorge Naldo da Silva Pedrosa Joao Nazario Rodriguez	Stakeholders living within the project area, 70% of households were interviewed individually. They confirmed that they were notified of the project by Ayri and Mazinho in most cases. With little exception, all still had a positive view of the project (since Validation) and believed that it would benefit their community. Most confirmed benefits such as medical kits, and were interested in attending agricultural courses when they start. All interviewed were interested in gaining legal title to their land and understood that they

	did not currently own the land they lived on. Most felt the project benefits were something additional to what would have happened in the baseline scenario. The government did bring flour processing mills and a boat, and has had medical workers The individuals largely stated their hopes for the proposed benefits of the project. Verifiers noted their expected benefits were largely in agreement with the plan outlined in the PDD. The individuals also spoke to their respective living conditions and the possibility of expansion. It was noted only by a couple that they would like to expand their cleared additional area for farming. One said he needed to see benefits soon or he would likely continue clearing land.
(CCB Leakage Area) Jose Goncalves De Souza	This individual lives within the leakage area. He confirmed knowledge of the project and believed that its benefits would be helpful to both the individuals in the leakage area and the project area. His view of the project remained positive and he has seen no negative effects (such as increased harvesting or leakage) due to project activities.
Tomaz Nasimento de Melo	This is the individual who conducted bird surveys; he was not interviewed during the Validation but was the one who was contracted to complete the surveys in the end. We discussed the methodology used for the bird surveys and the sample that was collected. He used a slightly different method of survey than those discussed at validation. He used a methodology widely accepted by the FAO; this process involved all of the key elements of the validated approach: using sample plots, strip transects and point counts. Ultimately, ESI did not deem a gap validation necessary, provided they're using photography, vocal recordings and an ornithologist as mentioned in the

	PDD. In his opinion the project activity will benefit biodiversity. He did notice that the community members were hunting certain species that the project should address if possible.
(Stakeholders living outside of project area) Antonio Goncalves de Souza Rosair Morais Castro- and her husband Cirlei dos Anjos Damasceno	These people were asked if they were aware of the project, or if they had been negatively affected by project activities (such as increased deforestation). Most were not aware of details of the project, but had a positive view of conservation projects. They seemed interested in finding out more about potential project activities, either by reading project documents, or looking at public information online (two had access to computers as they worked in the school district). No one had seen an increase in deforestation nor had been negatively affected, but they were cautious of possible negative effects in the future.
(Adjacent Landowners) Felipe Francio Carlos and Antonio	Discussed the baseline scenario, and additionality of project benefits. They both were currently doing cattle management on large scales and thought conversion on this property was plausible. Neither had been negatively affected by the project activities and had not noticed deforestation rates increasing during the verification period. Both mentioned families living on their land that have no land title and no access to government assistance. All health services are in the city and the inhabitants have to travel to the city for medical assistance.

The interviews confirmed with reasonable assurance that no community members will be negatively affected by the project and that most community members are participating in project activities and feel that they are a benefit. Further, it is clear that the Brazilian government supports the project.

2.4 Site Inspections

The verification site inspection followed the prepared Verification and Sampling Plan process and was conducted on 10-22 November 2015. A ground inspection of the project area was conducted during the site visit and members of the Verification Team visited several targeted areas within and surrounding the project area. Communities were visited along the river and adjacent to the project area to gain a sense of the risks associated with the community benefits from the project.

During the field review of the project, the following aspects of the project were assessed:

General

- Project boundaries
- Pre-project conditions, as evidenced by condition of adjacent or nearby non-project areas, by evidence of site-preparation activities, and related
- Baseline scenario and supporting assumptions and evidence
- Eligibility criteria and supporting assumptions and evidence
- Current project conditions, including reported tree species, expected current density, reported growth characteristics (diameter, or similar), and reported biomass volume (above- and/or below-ground).
- An evaluation of project boundaries using GPS and project proponent's KML or GPX files provided, and ground truthing with site visit data points.
- An assessment of the performance of the project activities and operations through visual inspection and through interviews with the project proponent's staff.
- Re-measurement of disturbance areas via GPS devices, and checking with satellite image analysis and monitoring. No inventory sampling plots were re-measured as a full inventory was completed at validation and is not necessary until baseline re-evaluation (at 10 years),
- ESI verified that operational, data collection procedures and monitoring methods were implemented in accordance with the SOP's as they are written.
- Assessment of the information flows for collection, collation and reporting of the baseline and monitoring parameters.
- Confirmation that the quality control and quality assurance procedures are in place.
- An assessment of additionality in the project area through visual assessment and interviews with project proponents, community members and staff.
- Review of the Non Permanence Risk Report and all related elements, including interviews to confirm the evidence provided in the PRA.

Leakage

- Visit the leakage belt, specifically hot spot areas of recent deforestation and confirmation of data collection methods in conformance with the stated SOP's for leakage monitoring
- Review and observation of high risk areas for leakage

- Review of leakage area monitoring, selection of leakage areas, justification for areas selected (on site visit)
- Activities for minimizing deforestation- what is planned, what is in process, what is being implemented

Management/Community

- Meet and interview project management team
- Review dispute and resolution process reporting
- Review benefit mechanism and funds allocation system- interview those involved
- Governance structure review and interviews with officials involved
- Interviews with community members, representatives of local administrative municipality, and other stakeholders regarding knowledge of the project, expectations and concerns (see interview list from sampling plan)
- Review Public Meeting notes and summaries
- Community training activities and associated planned activities

Sampling and site visit activities were designed to ensure a representative cross-section of the properties was assessed and that sampling took place in the areas of highest risk. Field observations sufficiently satisfied the professional discretion of the Verification Team that the findings in the monitoring report were accurate.

2.5 Resolution of Findings

During the verification process, there was a risk that potential errors, omissions, and misrepresentations would be found. The actions taken when errors, omissions, and misrepresentations were found included: notifying the client of the issue(s) identified, and expanding our review to the extent that satisfied the Lead Verifier's professional judgment.

The process of resolution of findings involved one formal round of assessment by the Verification Team. Findings were resolved during the verification by the Project Proponent implementing corrective actions, such as amending the Monitoring Report and calculations, as well as and providing written responses. This resulted in project documentation that was in conformance with the requirements of the VCS Standard (v3.4) for GHG projects.

Findings were characterized in the following manner:

Non-Conformity Reports (NCRs) were issued as a response to material discrepancies in a part of the project and generally fell into one category:

- Non-conformity to a VCS guiding document listed in Section 2.1 above
- Consistency among project documentation or calculations was lacking
- Mathematical formulae were incorrect

- Additional information was required by the verification team in order to confirm reasonable assurance for compliance

Clarifications (CL) were issued when language within a project document needed extra clarification to avoid ambiguity.

Opportunities for Improvement (OFI) were issued to the project proponents when an opportunity for improvement was identified.

During the course of the Verification, 13 NCRs and CLs were identified. All NCRs/CLs were satisfactorily addressed. The NCRs/CLs provided necessary clarity to ensure the project was in compliance with the requirements of the VCS for GHG projects and the selected methodology. Detailed summaries of each finding, including the issue raised, responses and final conclusions are provided in Appendix B.

2.5.1 Forward Action Requests

No forward action requests were identified during the verification.

2.6 Eligibility for Validation Activities

Validation activities were not undertaken as part of the verification.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The PD entitled “*The Envira Amazonia Project: A Tropical Forest Conservation Project in Acre, Brazil*” dated March 5, 2015 was previously validated by ESI. The validation process is described in the Validation Report, available on the VCS website. The Project Proponent has attested that none of the project area has been or will be registered under another carbon trading scheme during the VCS project lifetime, other than CCBA.

3.2 Methodology Deviations

The PD was previously validated and contained the following deviations from VM0007 v1.3:

- “Trees in the Cecropia genus will not be measured as part of the forest inventory. This has been proposed as a deviation as it stands in conflict with the CP-AB requirement that “all the trees above some minimum DBH in the sample plots” be measured.
- While sampling lying dead wood using the line intersect method:
 - o Two 92-meter transect lines were used rather than two 50-meter transect lines;
 - o The sampling lines did not bisect each sample plot, but rather ran from one plot center to the next; and

- o The sampling lines were oriented to the north and east, and no randomization in the bearing of the first line was employed.
- For validation of the allometric equation, commercial height was estimated from total height measured in the field by applying a factor of 62.9%. This commercial height to total height ratio is Amazon specific and was developed by Higuchi et al. 1998 (n = 315 trees).
- Rather than using a root to shoot ratio to estimate belowground biomass as per the CP-AB module, belowground biomass was estimated using an allometric equation developed by Cairns et al.¹
- The forest inventory has deviated from the criteria for selection (i.e., the equation is based on a datasets comprising at least 30 trees, with an r^2 that is ≥ 0.8) and validation of the allometric equation related to palm biomass, however the equation used is likely to result in a conservative estimate of palm biomass for the following reasons:
 - o Volume is calculated as the volume a paraboloid rather than the volume of a cylinder;
 - o Only stem biomass is estimated, thus conservatively excluding other aboveground biomass including palm fronds.
- Dead wood collected for density determination was opportunistically sampled from within forest strata present in the project area. The forest inventory collected a total of 39, 42, 37 samples for the sound, intermediate, and rotten² classes, respectively.
- Parameter UP,SS,i,pool# will be monitored at least once every 10 years, on re-measurement of forest carbon stocks. While module X-UNC requires that monitoring of this parameter occur every < 5 years, this requirement is inconsistent with the VM0007 pools modules, which specify that stock estimates (from which uncertainty is calculated) are assumed valid for 10 years. Therefore, a deviation to module X-UNC is applied to permit parameter UP,SS,i,pool# to be monitored every < 10 years, putting it into alignment with modules CP-AB and CP-D.

Rather than monitoring Cpost using modules CP-AB and CP-D as described in the MON modules, C(post) can conservatively be assumed to be zero in the with project case, not only for natural disturbance (CP,Dist,q,i , as stated in Section 5.2.3 of the M-MON module) but also for deforestation (CP,post,u,i). This deviation is conservative because subtracting zero from the baseline stocks, leads to the conclusion that $\Delta C_{pools,Def,u,i,t}$ is equal to $C(BSL,i)$, which leads to

¹ Cairns, M. A., S. Brown, E. H. Helmer, and G. A. Baumgardner. 1997. Root biomass allocation in the world's upland forests. *Oecologia* 111, 1-11.

² Note that 27 of the 37 rotten samples were sourced outside the project area as those sourced from within the project area did not return to the lab intact.

the maximum emission in the with project case, which is conservative. This deviation may be used for the first and each subsequent monitoring period.

3.3 Project Description Deviations

There were no deviations to the project description.

3.4 Grouped Project

Not applicable, as this is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activities and Monitoring Plan, as described in the validated PD, have been initiated. There are no remaining issues from the validation. As this is the initial verification, many activities are still being implemented and awaiting carbon revenue for completion, however the Verifiers observed considerable progress during the verification site inspection. The main objective of the project is the conservation of the tropical forest in the project region, and this has clearly been a success evidenced by the lack of commercial harvesting.

The Verifiers requested to visit examples of all activities during the various site inspections and subsequently confirmed the initial implementation of all items, as discussed in Section 2.1 of the EnviraProject's MR.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

ESI conducted an intensive review of all input data, parameters, formulas, calculations, conversions, statistics and resulting uncertainties and output data to ensure consistency with the VCS standard, the project PD and the methodologies. Further, ESI reproduced calculations for selected samples to ensure accuracy of the results. Conversion factors, formulas, and calculations were provided by the Project Proponent in spreadsheet format to ensure all formulas were accessible for review. The verifier recalculated subsets of the analysis to confirm correctness. The Project Proponent also provided a step-by-step overview of calculations to ensure ESI understood the approach and could confirm its consistency with the methodologies and PD.

An overview of the data and parameters monitored, along with ESI's findings, are included in the table below:

Data Parameter	Verification Team Findings
$\Delta C_{P,Def,i,t}$	This data/parameter was appropriately chosen because it pertains to net carbon stock change as a result of deforestation in the project case in the project area in stratum <i>i</i> at time <i>t</i> . This value was found to be calculated accurately in a spreadsheet

	("2014_EnviraMonitoring 2016.02.02.xlsx") according to the correct formula for the two year monitoring period. All deforestation monitoring was re-calculated by ESI via satellite image analysis, and a subset of discrepancies between spots of deforestation monitored and those re-calculated by ESI were ground truthed during the site visit.															
$\Delta C_{P,DistPA,i,t}$	This data/parameter was appropriately chosen because it pertains to net carbon stock change as a result of natural disturbance in the project case in the project area in stratum i at time t. The value applied was 0. This was appropriate as there were no areas of natural disturbance reported in by on-the ground forest monitors/local land managers and none was distinguished (from anthropogenic deforestation) with remote sensing analyses.															
$A_{DefPA,u,i,t}$	This data/parameter was appropriately chosen because it pertains to the area of recorded deforestation in the project area stratum i converted to land use u at time t. This value was found to be calculated accurately from remote sensing/GIS data and was implemented appropriately in the monitoring spreadsheet ("2014_EnviraMonitoring 2016.02.02.xlsx") according to the correct formula for the monitoring period. Values applied and verified correct were: <table><tr><th>Year</th><th>FAP + FAB + FD $A_{DefPA,u,i,t}$ (ha)</th><th>FAP + FAB $A_{DefPA,u,i,t}$ (ha)</th><th>FAB + FAP $A_{DefPA,u,i,t}$ (ha)</th><th>FAB - Aluvial $A_{DefPA,u,i,t}$ (ha)</th></tr><tr><td>2013</td><td>6.1</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>2014</td><td>26.1</td><td>0.0</td><td>0.8</td><td>8.5</td></tr></table>	Year	FAP + FAB + FD $A_{DefPA,u,i,t}$ (ha)	FAP + FAB $A_{DefPA,u,i,t}$ (ha)	FAB + FAP $A_{DefPA,u,i,t}$ (ha)	FAB - Aluvial $A_{DefPA,u,i,t}$ (ha)	2013	6.1	0.0	0.0	0.0	2014	26.1	0.0	0.8	8.5
Year	FAP + FAB + FD $A_{DefPA,u,i,t}$ (ha)	FAP + FAB $A_{DefPA,u,i,t}$ (ha)	FAB + FAP $A_{DefPA,u,i,t}$ (ha)	FAB - Aluvial $A_{DefPA,u,i,t}$ (ha)												
2013	6.1	0.0	0.0	0.0												
2014	26.1	0.0	0.8	8.5												
$A_{DefLK,i,t}$	This data/parameter was appropriately included because it pertains to the total area of deforestation by the baseline agent of the planned deforestation in stratum i at time, t. This parameter is assumed to be zero as the agent of deforestation is a project proponent, and has not planned any deforestation in the project scenario.															
$A_{DistPA,q,i,t}$	This data/parameter was appropriately chosen because it pertains to area impacted by natural disturbance in post-natural disturbance stratum q in stratum i, at time t. The value applied was 0. This was appropriate as there were no areas of natural disturbance reported in by on-the ground forest monitors/local land managers and none was distinguished (from anthropogenic deforestation) with remote sensing analyses.															

$C_{BSL,i}$	This data/parameter was appropriately included because it pertains to the carbon stock in all pools in the baseline case in stratum i and is estimated from the forest carbon inventory. This value was calculated and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions. The values that were confirmed to be correctly applied were: <table border="1"> <thead> <tr> <th>Strata</th><th>$C_{BSL,i}$ (t CO₂-e ha⁻¹)</th></tr> </thead> <tbody> <tr> <td>FAP + FAB + FD</td><td>546.5</td></tr> <tr> <td>FAP + FAB</td><td>513.2</td></tr> <tr> <td>FAB + FAP</td><td>498.0</td></tr> <tr> <td>FAB - Aluvial</td><td>655.4</td></tr> </tbody> </table>	Strata	$C_{BSL,i}$ (t CO ₂ -e ha ⁻¹)	FAP + FAB + FD	546.5	FAP + FAB	513.2	FAB + FAP	498.0	FAB - Aluvial	655.4
Strata	$C_{BSL,i}$ (t CO ₂ -e ha ⁻¹)										
FAP + FAB + FD	546.5										
FAP + FAB	513.2										
FAB + FAP	498.0										
FAB - Aluvial	655.4										
$\Delta C_{pools,Def,u,i,t}$	This data/parameter was appropriately chosen because it pertains to the carbon stock in all pools in post-deforestation land use u in stratum i. This value was found to be calculated accurately by strata in a spreadsheet ("2014_EnviraMonitoring 2016.02.02.xlsx") according to the correct formula for the two year monitoring period. Verified value applied was 536.5 t CO₂-e ha⁻¹										
$A_{DegW,i,t}$	This data/parameter was appropriately chosen because it pertains to the area potentially impacted by degradation processes in stratum i. The value applied was 0. This was appropriate as CarbonCo's assessment of degradation ("2014_EnviraDegradation 2016.01.15.xlsx") indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.										
$C_{DegW,i,t}$	This data/parameter was appropriately chosen because it pertains to the biomass carbon of trees cut and removed through degradation process from plots measured in stratum i at time t. The value applied was 0. This was appropriate as CarbonCo's assessment of degradation ("2014_EnviraDegradation 2016.01.15.xlsx") indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.										
AP_i	This data/parameter was appropriately chosen because it pertains to the total area of degradation sample plots in stratum i. This value was found to be appropriately calculated as 3% of $A_{DegW,i,t}$ as a parameter for monitoring illegal degradation. An actual value parameter was not used during this monitoring period. This was										

	appropriate as CarbonCo's assessment of degradation ("2014_EnviraDegradation 2016.01.15.xlsx") indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG and plot level monitoring of degradation is not warranted at this time.															
$\Delta C_{P,DegW,i,t}$	This data/parameter was appropriately chosen because it pertains to the net carbon stock changes as a result of degradation in stratum i in the project area at time t . This parameter was not used during this monitoring period, as the PRA indicated no degradation (value applied was 0). This was appropriate as CarbonCo's assessment of degradation ("2014_EnviraDegradation 2016.01.15.xlsx") indicated that emissions due to degradation (for this monitoring period) are insignificant as per T-SIG.															
Aburn,q,i,t.	This data/parameter was appropriately chosen because it pertains to the area burnt in post-natural disturbance stratum q in stratum i, at time t. It was conservatively assumed that the total area burnt during the deforestation process is equal to the area deforested, ADefPA,u,i,t. Values found to be appropriately applied were: <table><tr><th>Year</th><th>FAP + FAB + FD</th><th>FAP + FAB</th><th>FAB + FAP</th><th>FAB - Aluvial</th></tr><tr><td>2013</td><td>6.1</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>2014</td><td>26.1</td><td>0.0</td><td>0.8</td><td>8.5</td></tr></table>	Year	FAP + FAB + FD	FAP + FAB	FAB + FAP	FAB - Aluvial	2013	6.1	0.0	0.0	0.0	2014	26.1	0.0	0.8	8.5
Year	FAP + FAB + FD	FAP + FAB	FAB + FAP	FAB - Aluvial												
2013	6.1	0.0	0.0	0.0												
2014	26.1	0.0	0.8	8.5												
dbh	This data/parameter was appropriately chosen because it gives the tree diameter at breast height. DBH values were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented correctly in the quantification of net GHG emission reductions.															
dbasal	This data/parameter was appropriately chosen because it gives the basal diameter. Basal diameter values were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.															
H	This data/parameter was appropriately chosen because it gives the height of a tree. Tree heights were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.															
Dn	This data/parameter was appropriately chosen because it gives diameter of piece n of dead wood along a transect. Lying Dead															

	Wood diameters were measured and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.															
N	This data/parameter was appropriately chosen because it gives the total number of wood pieces intersecting a transect. The numbers of Lying Dead Wood pieces were tallied and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.															
L	This data/parameter was appropriately chosen because it gives the length of a transect. Transects were installed, measured, and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions.															
Cpost	Rather than monitoring Cpost using modules CP-AB and CP-D as described in the MON modules, C(post) can conservatively be assumed to be zero in the with project case.															
$U_{P,SS,i,pool\#}$	This data/parameter was appropriately included because it calculates the percentage uncertainty (expressed as 95% confidence interval as a percentage of the mean where appropriate) for carbon stocks and greenhouse gas sources in the with-project case (1,2...n represent different carbon pools and/or GHG sources). This data/parameter represents a deviation noted in Section 3.2.7 of this report and will be reviewed at time of baseline re-evaluation (every 10 years). These values were found to be applied accurately by strata in a spreadsheet ("2014_EnviraMonitoring 2016.02.02.xlsx") according to the correct formulae for the monitoring period. Confirmed values applied were: <table><tr><th>Strata</th><th>Live aboveground tree biomass</th><th>Belowground biomass</th><th>Standing dead wood</th><th>Lying dead wood</th></tr><tr><td>FAP + FAB + FD</td><td>6.6%</td><td>6.1%</td><td>52.2%</td><td>76.8%</td></tr><tr><td>FAP + FAB</td><td>9.1%</td><td>8.4%</td><td>43.5%</td><td>37.2%</td></tr></table>	Strata	Live aboveground tree biomass	Belowground biomass	Standing dead wood	Lying dead wood	FAP + FAB + FD	6.6%	6.1%	52.2%	76.8%	FAP + FAB	9.1%	8.4%	43.5%	37.2%
Strata	Live aboveground tree biomass	Belowground biomass	Standing dead wood	Lying dead wood												
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FAP + FAB	9.1%	8.4%	43.5%	37.2%												

	FAB + FAP	13.9%	12.9%	222.6%	66.6%																									
	FAB - Aluvial	10.2%	9.4%	264.1%	122.0%																									
EBSL SS,i, pool#	This data/parameter was appropriately chosen because it pertains to the carbon stock or GHG sources (e.g. trees, dead wood, soil organic carbon, emission from fertilizer addition, emission from biomass burning etc.) in the baseline case. This value was calculated and assessed <i>ex ante</i> (at validation). The appropriate <i>ex ante</i> estimates were found to be implemented appropriately in the quantification of net GHG emission reductions. Confirmed values applied were: <table><tr><td>Strata</td><td>Live aboveground tree biomass</td><td>Belowground biomass</td><td>Standing dead wood</td><td>Lying dead wood</td></tr><tr><td>FAP + FAB + FD</td><td>6,388,286</td><td>1,430,909</td><td>25,996</td><td>242,238</td></tr><tr><td>FAP + FAB</td><td>7,455,498</td><td>1,676,716</td><td>56,615</td><td>205,832</td></tr><tr><td>FAB + FAP</td><td>1,150,968</td><td>259,555</td><td>9,093</td><td>31,791</td></tr><tr><td>FAB - Aluvial</td><td>1,701,983</td><td>376,116</td><td>38,440</td><td>33,835</td></tr></table>					Strata	Live aboveground tree biomass	Belowground biomass	Standing dead wood	Lying dead wood	FAP + FAB + FD	6,388,286	1,430,909	25,996	242,238	FAP + FAB	7,455,498	1,676,716	56,615	205,832	FAB + FAP	1,150,968	259,555	9,093	31,791	FAB - Aluvial	1,701,983	376,116	38,440	33,835
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UBSL,SS,i,pool#	This data/parameter was appropriately chosen because it pertains to the percentage uncertainty (expressed as 95% confidence interval as a percentage of the mean where appropriate) for carbon stocks and greenhouse gas sources in the baseline case (1,2...n represent different carbon pools and/or GHG sources). These values were found to be calculated accurately by strata in a spreadsheet ("2014_EnviraMonitoring 2016.02.02.xlsx") according to the correct formulae for the monitoring period. Confirmed values applied were: <table><tr><td>Strata</td><td>Live aboveground</td><td>Belowground biomass</td><td>Standing dead</td><td>Lying dead</td></tr></table>					Strata	Live aboveground	Belowground biomass	Standing dead	Lying dead																				
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		tree biomass		wood	wood										
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	FAB + FAP	13.9%	12.9%	222.6%	66.6%										
	FAB - Aluvial	10.2%	9.4%	264.1%	122.0%										
EBSL SS,i	This data/parameter was appropriately included because it calculates the sum of combined carbon stocks and GHG sources in stratum i multiplied by the area of stratum i (Ai) in the baseline case. These values were found to be calculated accurately by strata in a spreadsheet (“2014_EnviraMonitoring 2016.02.02.xlsx”) according to the correct formulae for the monitoring period. Confirmed values applied were: <table><tr><th>Strata</th><th>EBSL,SS,t,I (tCO2e)</th></tr><tr><td>FAP + FAB + FD</td><td>8,087,429</td></tr><tr><td>FAP + FAB</td><td>9,394,661</td></tr><tr><td>FAB + FAP</td><td>1,451,406</td></tr><tr><td>FAB - Aluvial</td><td>2,150,373</td></tr></table>					Strata	EBSL,SS,t,I (tCO2e)	FAP + FAB + FD	8,087,429	FAP + FAB	9,394,661	FAB + FAP	1,451,406	FAB - Aluvial	2,150,373
Strata	EBSL,SS,t,I (tCO2e)														
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UBSL,SS,i	This data/parameter was appropriately included because it determines the percentage uncertainty in the combined carbon														

	stocks and greenhouse gas sources in stratum i in the baseline case. These values were found to be calculated accurately by strata in a spreadsheet (“2014_EnviraMonitoring 2016.02.02.xlsx”) according to the correct formulae for the monitoring period. Confirmed values applied were: <table><tr><th>Strata</th><th>UncertaintyBSL,SS,I (%)</th></tr><tr><td>FAP + FAB + FD</td><td>5.8%</td></tr><tr><td>FAP + FAB</td><td>7.4%</td></tr><tr><td>FAB + FAP</td><td>11.4%</td></tr><tr><td>FAB - Aluvial</td><td>9.7%</td></tr></table>	Strata	UncertaintyBSL,SS,I (%)	FAP + FAB + FD	5.8%	FAP + FAB	7.4%	FAB + FAP	11.4%	FAB - Aluvial	9.7%
Strata	UncertaintyBSL,SS,I (%)										
FAP + FAB + FD	5.8%										
FAP + FAB	7.4%										
FAB + FAP	11.4%										
FAB - Aluvial	9.7%										
Bi,t	This data/parameter was appropriately included because it calculates the average aboveground biomass stock before burning stratum i,time t. Emissions from biomass burning in project boundaries appropriately reference weighted average stocks. These values are derived from the forest inventory and were confirmed at Validation (they will be updated every 10 years). These values were found to be applied accurately by strata in a spreadsheet (“2014_EnviraMonitoring 2016.02.02.xlsx”) according to the correct formulae for the monitoring period. Confirmed values applied were: <table><tr><th>FAP + FAB + FD B,i,t (t d.m./ha)</th><th>FAP + FAB B,i,t (t d.m./ha)</th><th>FAB + FAP B,i,t (t d.m./ha)</th><th>FAB - Aluvial B,i,t (t d.m./ha)</th></tr><tr><td>261.0</td><td>244.7</td><td>237.3</td><td>313.8</td></tr></table>	FAP + FAB + FD B,i,t (t d.m./ha)	FAP + FAB B,i,t (t d.m./ha)	FAB + FAP B,i,t (t d.m./ha)	FAB - Aluvial B,i,t (t d.m./ha)	261.0	244.7	237.3	313.8		
FAP + FAB + FD B,i,t (t d.m./ha)	FAP + FAB B,i,t (t d.m./ha)	FAB + FAP B,i,t (t d.m./ha)	FAB - Aluvial B,i,t (t d.m./ha)								
261.0	244.7	237.3	313.8								
AGB	This data/parameter was appropriately included because it calculates the aboveground biomass density. These values are calculated using forest inventory data and were confirmed at validation. Plot level values were confirmed in the Forest Inventory Report.										
Asp	This data/parameter was appropriately included because it determines the area of sample plots in ha. The validated value of 0.16619 ha or a 23m radius circle was confirmed to be used in the										

	Forest Inventory Report.										
Hsdw	This data/parameter was appropriately included because it determines the height of standing dead trees in meters. The appropriate <i>ex ante</i> estimates were found to be implemented correctly in the quantification of net GHG emission reductions.										
DDWdc	This data/parameter was appropriately included because it calculates the mean wood density of dead wood according to density class (dc) – sound (1), intermediate (2), and rotten (3); t d.m. m-3. The appropriate <i>ex ante</i> estimates (confirmed at validation) were found to be implemented correctly in the quantification of net GHG emission reductions. Confirmed values applied were: <table border="1"> <thead> <tr> <th>Density Class</th><th>Density (t d.m. m-3)</th></tr> </thead> <tbody> <tr> <td>Rotten (P)</td><td>0.131</td></tr> <tr> <td>Intermediary (I)</td><td>0.382</td></tr> <tr> <td>Solid (S)</td><td>0.517</td></tr> </tbody> </table>	Density Class	Density (t d.m. m-3)	Rotten (P)	0.131	Intermediary (I)	0.382	Solid (S)	0.517		
Density Class	Density (t d.m. m-3)										
Rotten (P)	0.131										
Intermediary (I)	0.382										
Solid (S)	0.517										
CP,Dist,q,i	This data/parameter was appropriately included because it determines carbon stock in all pools in post-natural disturbance <i>q</i> in baseline stratum <i>i</i> . Carbon stocks must be confirmed to be measured and estimated using the methods given in module CP-AB and CP-D.										
Ai	This data/parameter was appropriately included because it defines the total area of stratum <i>i</i>. This parameter changed during validation as a result of adjustments made to the project area, leakage belt and RRD (outlined in section 3.2.6 above of the Validation Report). Validated stratum areas were re-reviewed and found to be correct. Confirmed values applied during the verification were: <table border="1"> <thead> <tr> <th>Strata in Project</th><th>Ai (ha)</th></tr> </thead> <tbody> <tr> <td>FAP + FAB + FD</td><td>14,800</td></tr> <tr> <td>FAP + FAB</td><td>18,306</td></tr> <tr> <td>FAB + FAP</td><td>2,915</td></tr> <tr> <td>FAB - Aluvial</td><td>3,281</td></tr> </tbody> </table>	Strata in Project	Ai (ha)	FAP + FAB + FD	14,800	FAP + FAB	18,306	FAB + FAP	2,915	FAB - Aluvial	3,281
Strata in Project	Ai (ha)										
FAP + FAB + FD	14,800										
FAP + FAB	18,306										
FAB + FAP	2,915										
FAB - Aluvial	3,281										

AAplanned,i,t	This data/parameter was appropriately included because it computes annual area of baseline planned deforestation for stratum i at time t. At validation, Project proponents requested a formal exemption from VCS for setting this parameter AAplanned,i,t (ha) to 8,000 per year instead of 200,000ha. Therefore requesting a cap on the annual area of deforestation in the baseline case. The larger calculated rate was due to the property size (and possible error in BL-PL equation), that gives an infeasible result (i.e. to deforest the entire project area in the baseline within 2 years). 8,000 ha/year was deemed by VCS to be more conservative. Project proponents further state that rate of deforestation in the baseline case as determined from the proxy areas is representative of the project area, and this component is assessed elsewhere in the Verification. Additional information on VCS formal exemption approval can be found in a letter drafted by the Project Proponents; CarbonCo Letter for Envira Amazonia Project Exemption.pdf and associated emails in the Verification archive. See also VCS final approval (CarbonCo Deforestation Rate Cap Exemption Request.pdf). The validated value of this parameter AAplanned,i,t (8,000 ha/year) was confirmed to be used in the quantification of net GHG emission reductions.								
Aplanned,i	This data/parameter was appropriately included because it pertains to total area of planned deforestation over the baseline period for stratum i. The project property value of 200,000 hectares was correctly applied.								
ALT,i	This data/parameter was appropriately included because it pertains to emissions from timber harvest in stratum i in the baseline case potentially displaced through implementation of carbon project. It correctly uses the value obtained from equation 4 in the LK-ME module, specifically parameter CBSL,XBFWC,i,t. Confirmed values applied during the verification were: <table border="1"> <thead> <tr> <th>Year</th><th>ALT,i</th></tr> </thead> <tbody> <tr> <td>2013</td><td>1,493,538</td></tr> <tr> <td>2014</td><td>1,493,538</td></tr> <tr> <td>2015</td><td>1,493,538</td></tr> </tbody> </table>	Year	ALT,i	2013	1,493,538	2014	1,493,538	2015	1,493,538
Year	ALT,i								
2013	1,493,538								
2014	1,493,538								
2015	1,493,538								
CXB,sawnwood	This data/parameter was appropriately included because it pertains to carbon emission due to displaced timber harvests in the baseline								

	scenario in stratum in time t . It correctly uses the value obtained from the LK-ME module, specifically parameter $VBSL,EX,i,t$ (m3) or volume of timber projected to be extracted from within the project boundary during the baseline in stratum i at time t ; m3.
Pcomi	This data/parameter was appropriately included because it pertains to commercial volume as a percent of total aboveground volume in stratum i . This parameter was checked at validation to be sure that commercial species likely to be harvested are reasonable and it correctly references average total biomass. The verification confirmed that the validated value of 0.13 was applied in the quantification of net GHG emission reductions.
CWP100,i	This data/parameter was appropriately included because it pertains to carbon stocks entering the wood products pool at the time of deforestation that is expected to be emitted over 100-years from stratum i ; t CO ₂ -e ha-1. The validated value was confirmed to be correctly computed from Equation 2 within module CP-W. The verification confirmed that the validated value of 24.1 tons CO ₂ /ha was applied in the quantification of net GHG emission reductions.
CWP,i	This data/parameter was appropriately included because it pertains to carbon stocks entering wood products pool at time of deforestation from stratum i . The value as confirmed to be correctly computed from Equation 2 within module CP-W. The verification confirmed that the validated value of 27.7 tons CO ₂ /ha was applied in the quantification of net GHG emission reductions.
NewRi,t	This data/parameter was appropriately included because it pertains to new calculated forest clearance in stratum i at time t by the baseline agent of the planned deforestation where no leakage is occurring. The value as confirmed to be correctly computed from Equation 4 within module LK-ASP. A value of 0 was applied for the monitoring period.
PMPi	This data/parameter was appropriately included because it pertains to merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundaries. Verification Team found the value to be correctly computed from merchantable and total aboveground biomass. This parameter is required to be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event. The applied value of 11.9% derived from the project inventory that occurred at validation, and was reviewed during this verification. The value was deemed appropriate and was confirmed to have been appropriately applied in the

	quantification of net GHG emission reductions.
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The Verification Team also reviewed a comprehensive assessment of data collection and storage procedures to ensure all opportunities for error in transposition of data between storage devices were minimized.

Uncertainty was assessed as required. The Verification Team recalculated the statistics independently to confirm the accuracy of the reported precision and confirmed no confidence deduction was required.

Field data collection utilized appropriate principles of forestry data collection, including appropriate tools and methods. Collected data was handled appropriately, including a structured process for QA/QC. Analysis of collected data used appropriate formulas, conversions, and parameters, supported by scientific literature. Where ranges of parameters exist, or other types of formulaic uncertainty, appropriately conservative values were used in data analysis.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

During ESI's verification, the evidence provided by the Project Proponent was more than sufficient in both quantity and quality to support the determination of GHG emission removals reported by the project. Throughout the verification, the Project Proponent demonstrated a commitment toward conservativeness and took all measures appropriate to ensure the reliability of evidence provided.

The evidence provided to determine emission reductions reported in the monitoring report included values, notations, units and sources. This evidence has been cross checked with supplied emission reduction calculation spreadsheets and a comprehensive GIS dataset. The procedure for data recording, transfer and final transposition was also verified and found to be in compliance with the monitoring plan outlined in the PD. The verification team was able to confirm through cross checks that adequate monitoring mechanisms are in place where the required parameters need to be monitored.

Interviews conducted (oral evidence) are outlined in Section 2.3 above, and the final documents received from the Project Proponent supporting the determination of GHG removals can be viewed in Appendix A.

4.4 Non-Permanence Risk Analysis

The *Envira Amazonia Project* utilized a non-permanence risk analysis tool, "T-BAR", to assess risk according to internal risk, external risk, natural risk, and mitigation measures for minimizing risk. At all levels, the Verification team evaluated the rationale, appropriateness, and justifications of risk ratings chosen by project proponents. Each risk factor was thoroughly assessed for conformance. Any identified NCR and/or CL findings related to the AFOLU Non-Permanence Risk Tool/Report are presented in Appendix B. The final score was calculated to be 23%. A brief review of each factor is found in the table below:

Factor	Rationale & Quality	Conclusion
Internal Risks		
Project Management	Ongoing enforcement is required to prevent encroachment by outside actors. The Envira Project employs forest patrols to prevent encroachment by outside actors into the project area = 2. Management team does include individuals with significant experience in all skills necessary to successfully undertake all project activities = 0. Local management partners are based in Rio Branco less than a day's travel from the project activity. There is a project manager living on the property and a project headquarters is being established on the property. Site visit confirmed this situation. Issue is scored appropriately = 0. Project proponents have developed other forest carbon projects and have been working in the forest carbon arena for over 5 years. Brian McFarland of CarbonCo has developed the Russas, Valparaiso and Purus Projects under the VCS and the CCBS including managing the project design, implementation, and financing. The project proponents work alongside and have access to experts in carbon accounting and reporting (i.e., TerraCarbon) who have significant experience in all aspects of AFOLU project design and implementation, carbon accounting and reporting under the VCS Program. TerraCarbon has successfully validated and verified numerous projects under the VCS, including validation and verification of the VCS ARR project "Reforestation Across the Lower Mississippi Valley. The explanation is acceptable given that validators have worked with several members of the management team and are familiar with their experience enough to agree with this mitigation credit.= -2 There is no adaptive management plan in place = 0	A risk rating of 0 is appropriate given the rationale provided.

	Encroachment concerns are addressed through use of on-going forest patrols and the management team does not include individuals with skills necessary to undertake all project activities. Aside from the aforementioned increased risks, project proponents have substantial experience in the global forest carbon thus also lowering overall internal risk. Other project management components were confirmed to have been applied during the site visit.	
Financial Viability	The verifier has reviewed the support documentation provided by the Project Proponent. Confirmation of funds from the CFO, a bank statement of the company and a emission reduction purchase agreement between CarbonCo and a buyer, all provide evidence to provide reasonable assurance that the break-even point is less than 4 years = 0. Project has secured 100% of funding needed to cover the total cash out before the project reaches breakeven. CarbonCo has also provided evidence of sufficient unrestricted, internal financial resources (details confidential) Details are provided in a cash flow analysis which can be found in the project database = 0. The verifier has reviewed the support documentation provided by the PP. The letter from the CFO provides confirmation that the funds are non-restricted and that there is accessibility to funds. Based on that documentation, and the reviewed bank statement, the verifier has obtained reasonable assurance that the project has the ability to access funding as needed = -2.	A risk rating of 0 is appropriate given the rationale provided.
Opportunity Cost	The highest risk rating has been chosen as the NPV from the most profitable alternative land use activity (pasture) is expected to be at least 100% more than that associated with project activities. An NPV analysis is not required as the chosen risk rating is the highest and most conservative. Verifiers agree that the majority of the baseline activities are subsistence driven as	A risk rating of 6 is appropriate.

	evidenced by verifiers' observations and discussions with community members in the project area. NPV from the most profitable alternative land use activity (pasture) is expected to be at least 100% more than that associated with project activities = 8. There is a legal contractual agreement to maintain the project area as forest for at least a 60 year period (i.e. greater than the length of the crediting period) from the project start date ("Duarte Tri-Party Agreement English, Fully Signed and Certified.pdf"). The agreement is for "a minimum term of thirty (30) years", and disallows: i. Clearing the forest for livestock; ii. Clearing the forest for agriculture; iii. Expanding old roads or constructing new ones...; iv. Expansion into new forests on Property for community use or infrastructure facilities (i.e., bridges, housing, electricity, etc.); v. Expanding logging operations; and vi. Deforestation for new mining or mineral extraction." = -2.	
Project Longevity	The PD states, "There is a legal contractual agreement to maintain the project area as forest for at least a 30 year period (i.e. the length of the crediting period) from the project start date."	A risk rating of 15 is appropriate given the rationale provided.
Total Internal Risks		21
External Risks		
Land Tenure and Resource Access Impacts	The landowner, Duarte Jose do Couto Neto, who is also a project proponent (JR Agropecuária e Empreendimentos LTDA), owns the project area outright (see Section 1.12) and has full resource access/use rights, which are not shared with anyone. The property was geo-referenced and officially registered in the cadaster (Cadastro Ambiental Rural), a process which involved on the ground assessment of all property boundaries and consultations with neighbouring landowners and resolution of any existing boundary disputes.	A risk rating of 0 is appropriate given the rationale provided.

	The file Envira Amazonia Project's Certidao.pdf (or certification of full rights) referenced in section 1.12 of the PD was provided by the project proponents and page 2 correctly identifies Duarte Jose do Couto Neto as the owner. The property appears to have been properly geo-referenced and any boundary disputes resolved. = 0. Site visit observations and discussions with community members indicated that the communities who live within the project area do not own the land they are living on. Further, no existing disputes over access/use rights (or overlapping rights) were observed during the site visit. = 0. There is a legal contractual agreement to maintain the project area as forest for at least a 60 year period (i.e. greater than the length of the crediting period) from the project start date = -2.	
Community Engagement	All households living on the Envira Amazonia property directly adjacent to the project area have been consulted. Given that 100% of the local communities have been consulted and are involved in the project neither A nor B is applicable, and thus the default risk value of zero is applicable. Verifiers' observations and several personal meetings confirm that this is the case and have no reason to believe that any communities within the project area have been passed over. = 0	A risk rating of 0 is appropriate given the rationale provided.
Political Risk	Independent calculation of the average governance score for 2010 through 2014 is 0.03, is eligible for a score of 2. Acre, Brazil is participating in the Governors' Climate and Forest Taskforce. Further, Brazil has an established Designated National Authority under the CDM and has at least one registered CDM Afforestation/Reforestation project. "The jurisdiction in which the project is located is participating in the Governors'	A risk rating of 0 is appropriate given the rating for governance and participation in beneficial projects.

	Climate and Forest Taskforce (GCF). "Independent web search reveals that the statement made by the Project Proponent is true = -2	
Total External Risks		0
Natural Risks		
Fire, pests and disease, extreme weather, geologic risk,	Fire - justification for the 10-25 year return interval is sound. Verifiers understand that the area rarely sees natural fire due to the high prevalence of moisture with the exception of drought periods. Further, this criterion is assessing naturally caused fires not anthropogenic fires for land clearing activities. The fire return interval from the referenced study Cochrane and Laurance, is reasonable as natural fires generally occur less frequently than one fire every 15 years. The verifier believes that the associated risk for fire is reasonable = 2. Pest and Disease - Risk Report states "The forests of the project area have a high diversity of tree species, with over 150 tree species >10 cm dbh, and like other diverse tropical forests, are not known to be subject to catastrophic disturbance by insect pests or forest diseases. Forest pests and diseases as a source of risk are more relevant in temperate forests or plantations, with low species diversity and consequently susceptible to extensive damage due to pest and disease outbreaks, which tend to be concentrated on single host species. Further, there is no history of catastrophic forest disturbance due to forest pests or diseases in the region." Verifiers independently searched the internet for any relevant forest pest or disease issues and could not locate any information that would lead validators to think that this item was scored incorrectly. Several references indicate that there are numerous endemic diseases and pests in the Amazon Forest,	A risk rating of 2 is appropriate given the rationale provided for the greatest natural risk of fire.

	however none appear to be of epidemic proportions, nor is there much history of such occurrences. The diversity of the forested landscape appears to help to mitigate any widespread issues. Clearly climate change could play a greater role in this area in the future, however at this time, this element appears to be scored correctly = 0. Extreme Weather - While extreme weather events in the region include drought, flooding, and disturbance by wind, this analysis is limited to disturbance by wind as this is the only disturbance which has a direct effect on carbon stocks. As flooding within the project region is common, high water levels in the forest do not lead to a reduction in the forest carbon stocks. Drought does not have a direct effect on existing forest carbon stocks, but instead can increase the severity of forest fires and hence is covered above in the section on fire risk. In relation to disturbance by wind, the recurrence intervals for large blow down disturbances in the western Amazon have been estimated at 27,000 years. Verifiers independently searched the internet for any relevant weather related issues and could not locate any information that would lead to the belief that this item was scored incorrectly. Observations on the site visit corroborate. Climate change could play a greater role in this area in the future, however at this time; this element appears to be scored correctly = 0. Geologic Risk - Neither volcanoes nor active tectonic fault lines are present within the project area. Landslides are not likely to occur within the project area because the project area is relatively level (less than 5% slope) terrain. Verifiers agree with this evaluation. This item is scored appropriately = 0	
Total Natural Risks		2

Overall Risk Rating = 23

5 VERIFICATION CONCLUSION

After review of all project information, procedures, calculations, supporting documentation and site visits, ESI confirms that the monitoring conducted by the Project Proponent, along with the supporting Monitoring Report, are accurate and consistent with all aforementioned VCS criteria, the validated PD, and the selected methodology (VM0007, v1.3). ESI confirms that the 2014 *Envira Monitoring Report* (v1.0 dated 02 February 2016) has been implemented in accordance with the validated PD.

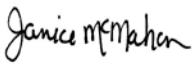
ESI confirms all verification activities, including objectives, scope and criteria, level of assurance, monitoring and project documentation adherence to VCS Version 3 (and all associated updates), as documented in this report are complete. ESI concludes without any qualifications or limiting conditions that *The Envira Project: A Tropical Forest Conservation Project in Acre, Brazil*, meets the requirements of VCS Version 3 and all associated updates for the first monitoring period.

The GHG assertion provided by CarbonCo and verified by ESI has resulted in the GHG emissions reduction or removal of 5,460,695 tCO₂ equivalents by the project during the verification period/reporting period (02 August 2012 – 31 December 2014). This value is gross of the 23% (1,530,771 tCO₂ equivalents) buffer withholding based on the non-permanence risk assessment tool. This results in 3,929,924 tCO₂ equivalents of credits eligible for issuance as VCUs.

Verified GHG emission reductions and removals in the above verification period (02 August 2012 – 31 December 2014):

Years	Estimated baseline emissions or removals (tCO _{2e})	Estimated project emissions or removals (tCO _{2e})	Estimated leakage emissions (tCO _{2e})	Risk buffer (%)	Deductions for AFOLU pooled buffer account (tCO _{2e})	GHG credits eligible for issuance as VCUs (tCO _{2e})
2013	3,277,844	3,453	597,415	23%	753,110	1,923,866
2014	3,402,275	21,140	597,415	23%	777,661	2,006,058
Totals	6,680,119	24,593	1,194,830		1,530,771	3,929,924

Submittal Information:

Report Submitted to:	Verified Carbon Standard Association One Thomas Circle NW Suite 1050 Washington, DC 20005 CarbonCo, LLC 3 Bethesda Metro Center, Suite 700 Bethesda, Maryland 20814 USA 001-240-247-0630
Report Submitted by:	Environmental Services, Inc. - Corporate Office 7220 Financial Way, Suite 100 Jacksonville, Florida 32256
ESI Lead Verifier Name and  Signature	Guy Pinjuv Lead Verifier
ESI Division Regional Technical Manager Name and Signature 	Janice McMahon Vice President and Forestry, Carbon and GHG Division Regional Technical Manager
Date:	15 February 2016

GP/JM/rb VO14034/VCS Envira Project Verification Report_Final-20160215.doc
K pf 2/15/16

APPENDIX A – DOCUMENTS RECEIVED/REVIEWED

Documents received 07 August 2015

- Envira Amazonia Project Final Draft CCBS PIR, English (8-7-15).pdf
- 2014_EnviraMonitoring 2015.07.28.pdf

Documents received 27 August 2015

- Envira Amazonia Project Final Draft CCBS PIR, Portuguese (8-27-15).pdf

Documents received 09 September 2015

- Carbonfund org Foundation Inc - Employee Handbook - 2015-5 - FINAL, Brian Signed.pdf

Documents received 10 September 2015

- Envira Amazonia Project Summary Document, Portuguese (9-10-15).pdf
- Envira Amazonia Project Summary Document, English (9-10-15).pdf

Documents received 11 September 2015

- Envira 2014Monitoring_2015.07.22.xlsx

Documents received 14 September 2015

- Envira 2014Monitoring_2015.07.28.xlsx

Documents received 15 September 2015

- 2014 envira monitoring
 - o Envira Amazonia Project Summary Document, Portuguese (9-10-15).pdf
 - o Supporting Information
 - Accuracy Assessment
 - Acre2014AA.kml
 - 2014AA_points.xlsx
 - AA_points_map.jpg
 - AA_points_utm19s.dbf
 - AA_points_utm19s.prj
 - AA_points_utm19s.sbn
 - AA_points_utm19s.sbx
 - AA_points_utm19s.shp
 - AA_points_utm19s.shp.xml
 - AA_points_utm19s.shx
 - o 2014_EnviraMonitoring 2015.07.28.docx
 - o 2014_EnviraMonitoring 2015.07.28.pdf
 - o Envira 2014Monitoring_2015.07.28.xlsx
 - o Envira Amazonia Project Final Draft CCBS PIR, English (8-7-15).pdf
 - o Envira Amazonia Project Final Draft CCBS PIR, Portuguese (8-27-15).pdf
 - o Envira Amazonia Project Summary Document, English (9-10-15).pdf
- Forest Inventory
 - o EnviraEqVal 2015.03.13.xlsx
 - o Envira Forest Inventory 2015.03.13 clean.doc
 - o EnviraCalc 2015.03.13.xls
- GIS
 - o 2014 Monitoring
 - 2014_PA_Monitoring_Envira.shx
 - Desmate_TC_1988_2014
 - Desmate_TC_1988_2014.shx

- Desmate_TC_1988_2014.dbf
 - Desmate_TC_1988_2014.prj
 - Desmate_TC_1988_2014.sbn
 - Desmate_TC_1988_2014.sbx
 - Desmate_TC_1988_2014.shp
 - Desmate_TC_1988_2014.shp.xml
- 2014_PA_Monitoring_Envira.dbf
- 2014_PA_Monitoring_Envira.prj
- 2014_PA_Monitoring_Envira.sbn
- 2014_PA_Monitoring_Envira.sbx
- 2014_PA_Monitoring_Envira.shp
- 2014_PA_Monitoring_Envira.shp.xml
- o Inventory
 - EnviraInventory_20140331_completed.shx
 - EnviraInventory_20140331_completed.dbf
 - EnviraInventory_20140331_completed.prj
 - EnviraInventory_20140331_completed.sbn
 - EnviraInventory_20140331_completed.sbx
 - EnviraInventory_20140331_completed.shp
 - EnviraInventory_20140331_completed.shp.xml
- o ProjectBoundaries
 - Seringal4_area.shx
 - EnviraPA_20140327.dbf
 - EnviraPA_20140327.kmz
 - EnviraPA_20140327.prj
 - EnviraPA_20140327.sbn
 - EnviraPA_20140327.sbx
 - EnviraPA_20140327.shp
 - EnviraPA_20140327.shp.xml
 - EnviraPA_20140327.shx
 - EnviraStrata_20140327.dbf
 - EnviraStrata_20140327.prj
 - EnviraStrata_20140327.sbn
 - EnviraStrata_20140327.sbx
 - EnviraStrata_20140327.shp
 - EnviraStrata_20140327.shp.xml
 - EnviraStrata_20140327.shx
 - Seringal4_area.dbf
 - Seringal4_area.kmz
 - Seringal4_area.prj
 - Seringal4_area.sbn
 - Seringal4_area.sbx
 - Seringal4_area.shp
 - Seringal4_area.shp.xml
- Miscellaneous
 - o UCEGEO Methodology 2011.DOC
 - o Arag+úo and Shimabukuro 2010.pdf
 - o Brown 1997 Estimating Biomass and Biomass Change of Tropical Forests FAO.pdf
 - o FAO 2010 FRA Brasil.pdf
 - o Lehmann et al., 2002, WCSS Bangkok, paper no.0449.pdf
 - o METODOLOGIA DESMATAMENTO DO ACRE 2011.doc
 - o Salimon et al 2011.pdf
 - o Swami et al., 2009, Springer.pdf
- Risk Assessment
 - o Pro Forma for Envira Amazonia Project (10-7-14).xls

- o CC Vanguard March 2015 statement.pdf
 - o Cochrane and Laurance 2002 Fire as a large-scale edge effect in Amazon.pdf
 - o Cochrane et al. 1999 Positive Feedbacks in the Fire Dynamic of Tropical Forest.pdf
 - o Esp+ritoGÇÊSanto et al. 2010 Storm intensity and forest disturbances in the Amazon.pdf
 - o May 2015 CC Checking Statement.pdf
- validation files
 - o Title Documentation
 - Mapa Seringal Duarte.pdf
 - Envira Amazonia Project's Certidao.pdf
 - o Biodiversity
 - Envira KBA Trigger Species.xlsx
 - Acre's Vulnerable, Endangered and Critical Species.xlsx
 - Envira Amazonia Key Biodiversity Area.pdf
 - o Project Documents
 - Envira Amazonia VCS PD 2015.04.03.pdf
 - Env_ComVol_ 2015.03.13.xls
 - Env_PMP_ 2015.03.13.xls
 - Envira Amazonia 2015.03.13.xlsx
 - Envira Amazonia VCS Non-Permanence Risk Report 2015.04.03.pdf
 - Envira Amazonia VCS PD 2015.04.03.docx
 - o Project Proponents Contracts
 - Duarte Tri-Party Agreement Portuguese, Fully Signed and Certified.pdf
 - Duarte Tri-Party Agreement English, Fully Signed and Certified.pdf
- VCS Documents
 - o Methodology
 - VMD0017 X_UNC v2.0.pdf
 - T-SIG.pdf
 - VM0007 REDD-MF Version 1.4.pdf
 - VMD0001 CP-AB Live biomass.pdf
 - VMD0002 CP-D Dead wood.pdf
 - VMD0005 CP-W, v1.1.pdf
 - VMD0006 BL-PL v1.2.pdf
 - VMD0009 LK-ASP, v1.1.pdf
 - VMD0011 LK-ME Leakage market effects.pdf
 - VMD0013 E-BB Biomass burning.pdf
 - VMD0015 M-MON, v2.1.pdf
 - VMD0016 X-STR Stratification.pdf
 - o VCS
 - VCS Standard, v3.4.pdf
 - AFOLU Non-Permanence Risk Tool, v3.2.pdf
 - VCS Standard, v3.3.pdf

Documents received 08 October 2015

- CARTA - 01 - PORTUGUES.pdf
- CARTA - 01 - INGLÊS.pdf

Documents received 04 November 2015

- Packing List and Health and Safety for Brazilian Amazon Travel (Updated 11-4-15).doc
- Draft Copy of November 2015 Brazil Trip.docx

Documents received 28 December 2015

- Envira Amazonia Project Final CCBS PIR, English (12-28-15).pdf
- 034_01 CCBA NCR Checklist_Envira_rd1_FINAL, Brian's Responses.docx
- Carbonfund.org's Newsletter Annoucement.pdf
- a1521e.pdf

Documents received 13 January 2016

- 034_Envira_Verification_round 1 Responses 2016.01.13.xlsx

Documents received 25 January 2016

- 2014_EnviraMonitoring 2016.01.15.docx
- 034_Envira_Verification_round 1 Responses 2016.01.22.xlsx
- 2014_EnviraMonitoring 2016.01.15.xlsx
- Additional Support
 - o Pro Forma for Envira Amazonia Project (1-30-15).xls
 - o AA_2014 2015.10.02
 - Acre2014_AA_points_10_15.kml
 - 2014AA_points_10_15.xlsx
 - o DeforInLeakageAreas_2013-2014.shp
 - DeforInLeakageAreas_2013-2014.shx
 - DeforInLeakageAreas_2013-2014.dbf
 - DeforInLeakageAreas_2013-2014.prj
 - DeforInLeakageAreas_2013-2014.sbn
 - DeforInLeakageAreas_2013-2014.sbx
 - DeforInLeakageAreas_2013-2014.shp
 - DeforInLeakageAreas_2013-2014.shp.xml
 - o LeakageArea_2014.10.06.shp
 - LeakageArea_2014.10.06.shx
 - LeakageArea_2014.10.06.dbf
 - LeakageArea_2014.10.06.prj
 - LeakageArea_2014.10.06.sbn
 - LeakageArea_2014.10.06.sbx
 - LeakageArea_2014.10.06.shp
 - LeakageArea_2014.10.06.shp.xml
 - o 2014_EnviraDegradation 2016.01.15.xlsx
 - o Brazil Political Risk 2016.01.12.xlsx
 - o Chave et al 2006 Variation of wood density of neotropical species.pdf
 - o Envira Amazonia Project Letter on Fertilizers and Biomass.pdf
 - o Lehmann et al., 2002, WCSS Bangkok, paper no.0449.pdf

Documents received 28 January 2016

- Envira Amazonia Project Final CCBS PIR, Portuguese (1-28-16).pdf
- CARTAS ASSINADAS -PROPRIEDADES - DATA 27-01-2016.pdf
- Envira Amazonia Project Final CCBS PIR, English (1-28-16).pdf

Documents received 02 February 2016

- 2014_EnviraMonitoring 2016.02.02.docx
- 2014_EnviraMonitoring 2016.02.02.xlsx

Documents received 12 February 2012

- 2014_EnviraNonPermanenceRiskReport 2016.02.12.pdf
- 2014_EnviraMonitoring 2016.02.12.pdf

APPENDIX A – NCRS/CL/OFIS

Item Number	1
Approved VCS Methodology VM0007 Version 1.4, 3 May 2013 REDD Methodology Modules REDD Methodology Framework (REDD-MF) Sectoral Scope 14	Equation 1
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	MR Table 4.1
ESI Findings - Round 1 (12/01/2015)	Equation was applied, however not explicitly as written in REDD-MF, and the equation is not clearly labeled in the file Envira 2014Monitoring_2015.07.28.xls. This equation or the results of it are not clearly labeled in the MR though it appears they are presented in table 4.1.
Round 1 NCR/CL/OFI	CL: Please clearly indicate where equation 1 is calculated in the calculation file 014Monitoring_2015.07.28, and implement exactly as written in REDD-MF. Please also clearly indicate where the results of equation 1 are presented in the MR (it is assumed they are located in table 4.10).
Round 1 Response from Project Proponent (01/25/2016)	The calculation workbook has been modified to incorporate Eq 1 of the REDD-MF module. This equations is calculated in column F on tab 3.4 of the calculation workbook.
ESI Findings - Round 2 (01/25/2016)	Finding Closed: Verifiers confirmed that the calculation workbook has been modified to incorporate Eq 1 of the REDD-MF module. This equations is calculated in column F on tab 3.4 of the calculation workbook (2014_EnviraMonitoring 2016.01.15.xlsx). The elements of this equation (not the actual result), are located in MR table 4.10 and were confirmed to be correct.

Item Number	2
Approved VCS Methodology VM0007 Version 1.4, 3 May 2013 REDD Methodology Modules REDD Methodology Framework (REDD-MF) Sectoral Scope 14	Equation 2
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	MR, and Envira 2014Monitoring_2015.07.28.xls.
ESI Findings - Round 1 (12/01/2015)	Equation 2 appears to have been implemented correctly, however it is never explicitly calculated in the calculation file (Envira 2014Monitoring_2015.07.28.xls.) or presented in the MR.
Round 1 NCR/CL/OFI	CL: Please clearly indicate where equation 2 is calculated in the calculation file 014Monitoring_2015.07.28, and implement exactly as written in REDD-MF. Please also clearly indicate where the results of equation 2 are presented in the MR (it is assumed they are located in table 4.10).
Round 1 Response from Project Proponent (01/25/2016)	Equation 2 is only relevant in the baseline scenario, hence it is not relevant for monitoring in the project case.
ESI Findings - Round 2 (01/25/2016)	Equation 2 is related to the baseline scenario, which feeds into equation 1 (relevant in the project case). The correct result of equation 2 is confirmed to be located on the '3.1' tab Row BB. This equation is not complete (as written in Approved VCS Methodology VM0007 Version 1.4) as the Net greenhouse gas emissions in the baseline from degradation caused by fuelwood collection and charcoal making; t CO₂-e (from BL-DFW) is assumed to be zero (though this is not explicit in the calculation file). Results from equation 2 are fed into values presented in table 4.10 of the MR.

Round 2 NCR/CL/OFI	OFI: Equation 2 should clearly indicate all parameters as written in VM0007. All variables that are assumed to be zero in the calculation file 2014_EnviraMonitoring_2016.01.15.xlsx. should be either included in equations or commented for future verifiers .
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Item Number	3
Approved VCS Methodology VM0007 Version 1.4, 3 May 2013 REDD Methodology Modules REDD Methodology Framework (REDD-MF) Sectoral Scope 14	Equation 3
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	MR, and Envira 2014Monitoring_2015.07.28.xls.
ESI Findings - Round 1 (12/01/2015)	Equation 3 appears to have been implemented correctly; however, it is never explicitly calculated in the calculation file (Envira 2014Monitoring_2015.07.28.xls.) or presented in the MR.
Round 1 NCR/CL/OFI	CL: Please clearly indicate where equation 3 is calculated in the calculation file 014Monitoring_2015.07.28, and implement exactly as written in REDD-MF. Please also clearly indicate where the results of equation 3 are presented in the MR (it is assumed they are located in table 4.10).
Round 1 Response from Project Proponent (01/25/2016)	A modified version of equation 3 was used in Column AK tab 3.3 of the calculation workbook. We added the following text to cell AK3, "As noted in the project description, the terms Δ CLK-AS,unplanned and Δ CLK- AS,degrad-FW/C, have been left out of equation 3 as both terms are not applicable to a planned REDD project where degradation is not included in the baseline." While we could easily build these parameters into the equation and set these terms to zero; these terms should be excluded as described in the PD. This change in equation 3 has been clearly stated in Table 3.33 of the validated PD.

ESI Findings - Round 2 (01/25/2016)	Finding Closed: Verifiers confirmed that the calculation workbook has been modified to incorporate Eq 3 of the REDD-MF module. A comment is also included to describe any variables that are assumed to be zero. This (modified version) of the equation is calculated in Column AK tab 3.3 of the calculation workbook (2014_EnviraMonitoring 2016.01.15.xlsx). The result of this equation, is located in MR table 4.10 and were confirmed to be correct.
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Item Number	4
Approved VCS Module VMD0009, Version 1.1 (20 November 2012), REDD Methodological Module: Estimation of emissions from activity shifting for avoided planned deforestation (LK-ASP), Sectoral Scope 14	All areas deforested by the baseline agent of deforestation should be monitored.
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	MR Section 4.3, Envira 2014Monitoring_2015.07.28_ESI Data Check_LK_ASP.xlsx (3.3 tab), and Envira 2014Monitoring_2015.07.28.xlsx

ESI Findings - Round 1 (12/01/2015)	Section 4.3 of the MR refers to a letter from the baseline agents of deforestation, JR Agropecuária e Empreendimentos EIRELI, however this letter does not appear to constitute monitoring to the extent of activities listed in the validated PD, "The baseline agents of deforestation will be surveyed for each verification event. Further, this information will be checked against remote sensing/aerial imagery where available, including but not limited to: the most recent Acre deforestation dataset, Google Earth, or other." The methodology allows for sources to be: Remote Sensing data and/or legal records and/or survey information for lands owned or controlled or previously owned or controlled by the baseline agent of deforestation. Boundary spatial files of the properties owned by JR Agropecuária e Empreendimentos EIRELI, the baseline agent, have not yet been provided. MR Section 4.3 states, <i>"The baseline agents of deforestation, JR Agropecuária e Empreendimentos EIRELI, did not deforest any lands owned or under management by them as confirmed in a letter found in the project database. As such, there was no activity shifting leakage during this monitoring period."</i>
Round 1 NCR/CL/OFI	NCR: Please re-provide a copy of the letter to reinforce the assertion that AdefLK,i,t = 0 (so all evidence is in the response). As needed, please provide further evidence of the monitoring for all baseline agent lands. In doing so, please also provide spatial files of the boundaries of all properties owned by the baseline agent, JR Agropecuária e Empreendimentos EIRELI.
Round 1 Response from Project Proponent (01/25/2016)	An english and portuguese version of the requested letter is provided in response to this finding. Additional evidence indicate no deforestation took place at the hands for the baseline agent has been provided in the shapefile "DeforInLeakageAreas_2013-2014.shp". This file shows deforestation within the leakage areas for the years 2013 and 2014. The results indicate that 1602 ha of deforestation took place over a 2 years period in numerous small parcels and no large scale clearings. This is the equivalent of 801 ha of deforestation over an area of 363,598 ha. This equates with a background rate of deforestation of 0.22%. The shapefile "LeakageArea_2014.10.06.shp" has been provided in response to this finding. It contains the boundaries of all properties owned by the baseline agents.

ESI Findings - Round 2 (01/25/2016)	A translated version (CARTA - 01 - INGLÊS.pdf) of the letter from the baseline agent (CARTA - 01 - PORTUGUES.pdf) was reviewed in response to this finding. It asserts that no unauthorized logging or deforestation occurred in any of the baseline agent's properties included in the leakage area since the project start date of 02 August 2012. The letter was hand-signed and notarized. Geospatial files consisting of the leakage area boundaries and UCEGEO deforestation dataset were also submitted to support the assertion that no deforestation in the period was performed by the baseline agent. Verifiers reviewed supplied files for a subsection of the leakage area against independently acquired Landsat imagery and confirmed that indeed none of the parcels cleared are at scale of a private industrial landowner, few deforestation parcels exceeded 10ha. Deforestation by other actors or homesteaders in the region is common in the experience of verifiers. As noted in other CarbonCo projects, the UCEGEO dataset for Acre state offers a reliable and unbiased source for deforestation data which would have captured deforestation performed by the baseline agent on their lands in the period. The item is addressed.
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Item Number	5
Approved VCS Module VMD0009,Version 1.1 (20 November 2012), REDD Methodological Module: Estimation of emissions from activity shifting for avoided planned deforestation (LK-ASP), Sectoral Scope 14	Where a specific agent of deforestation has been identified fertilizer use and biomass burning shall be monitored.
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	Envira 2014Monitoring_2015.07.28_ESI Data Check_LK_ASP.xlsx (3.3 tab), and Envira 2014Monitoring_2015.07.28.xlsx
ESI Findings - Round 1 (12/01/2015)	Fertilizer use (N2Odirect-N,i,t) is not accounted for in project or baseline scenarios and biomass burning equated to zero at validation. However, no evidence of monitoring of fertilizer use and biomass burning could be located by the verification team

Round 1 NCR/CL/OFI	NCR: Please provide evidence of monitoring fertilizer use and biomass burning. If conservative assumptions are made concerning fertilizer use and biomass burning, please clarify this in the Monitoring Report.
Round 1 Response from Project Proponent (01/25/2016)	Emissions from biomass burning are calculated using information on the area that is burnt by the baseline agent. As this burning is associated with deforestation, $A_{burn,i,t} = A_{defLK}$. As no activity shifting leakage occurred, $A_{defLK} = 0$, it follows that $EBB=0$. Fertilizer use was monitored using a survey of the baseline agent. In response to questions on biomass burning and fertilizer use they issued the letter "Envira Amazonia Project Letter on Fertilizers and Biomass.pdf" which has been provided in response to this finding. It attests that no nitrogen based fertilizers or biomass burning has occurred during the monitoring period on lands they manage.
ESI Findings - Round 2 (01/25/2016)	Fertilizer use was monitored using a letter from the baseline agent. Envira Amazonia Project Letter on Fertilizers and Biomass.pdf. This letter attests that no nitrogen based fertilizers or biomass burning has occurred during the monitoring period on lands they manage.

Item Number	6
VCS Approved VCS Module VMD0011 Version 1.0 REDD Methodological Module: Estimation of Emissions from Market Effects (LK-ME) Sectoral Scope 14	The next step is to estimate the emissions associated with the displaced logging activity. This is based on the total volume that would have been logged in the baseline in the project area across strata and time periods. See equation 3 on page 3.
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	Envira 2014Monitoring_2015.07.28_ESI Data Check_LK_ASP.xlsx (3.3 tab), and Envira 2014Monitoring_2015.07.28.xlsx
ESI Findings - Round 1 (12/01/2015)	This equation was approved at validation, however the verification team could not follow how a sum through time from $t = 1$ to t was applied. Or alternatively how the result in column AB tab 3.3 represents ALT_i or "Summed emissions from timber harvest in stratum i in the baseline case potentially displaced through implementation of carbon project; t CO ₂ -e".

Round 1 NCR/CL/OFI	CL: please clarify how the results in column AB (tab 3.3) of the MR calculation worksheet represent a sum through time, or "Summed emissions from timber harvest in stratum i in the baseline case potentially displaced through implementation of carbon project; t CO ₂ -e" as shown in equation 3 on page 3 of VMD0011
Round 1 Response from Project Proponent (01/25/2016)	A note has been added to the cell AB3 of tab 3.3 in the calculation workbook that "This analysis assumes there is only one strata, hence $ALT_{i,t} = CBSL_{XBT,i,t}$. This is a valid assumptions as it would be impossible to determine which strata and what percentage of each strata are logged in each baseline year. Stratification is recommended not required."
ESI Findings - Round 2 (01/25/2016)	Verifiers confirm that equation 3 of VMD0011 is applied correctly assuming one strata. A clarifying note was added to the cell AB3 of tab 3.3 in the calculation workbook (2014_EnviraMonitoring 2016.01.15.xlsx) that states, "This analysis assumes there is only one strata, hence $ALT_{i,t} = CBSL_{XBT,i,t}$. This is a valid assumptions as it would be impossible to determine which strata and what percentage of each strata are logged in each baseline year. Stratification is recommended not required."

Item Number	7
VCS Approved VCS Module VMD0011 Version 1.0 REDD Methodological Module: Estimation of Emissions from Market Effects (LK-ME) Sectoral Scope 14	Data / parameter: PMPi Data unit: % Used in equations: Description: Merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundaries. Source of data: Within each stratum divide the summed merchantable biomass (defined as "Total gross biomass (including bark) of a tree 30 cm DBH or larger from a 30 cm stump to a minimum 10 cm top DOB of the central stem") by the summed total aboveground tree biomass Merchantable biomass is equal to merchantable volume multiplied by wood density (D_{mn}) Measurement procedures (if any): Monitoring frequency: Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event QA/QC procedures: Any comment: Ex-ante a time zero measurement shall be made of this factor.
Applicability to the Project (Y or N/A)	Y

Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	MR Section 3.1
ESI Findings - Round 1 (12/01/2015)	It appears that PMPi should be reviewed before any verification event (see section 3.1 of the MR). "Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event ."
Round 1 NCR/CL/OFI	CL: Please provide the monitoring/measuring procedure of proportion of merchantable biomass from aboveground biomass (PMPi) so its can be evaluated during this verification event.
Round 1 Response from Project Proponent (01/25/2016)	The parameter "PMPi" is used to estimate "LFME" or Leakage factor for market-effects calculations. As noted in the monitoring report "Market leakage values calculated ex-ante (in Section 3.3 of the PD) are also used <i>ex post</i> as no with project harvesting of timber, fuel wood or charcoal is destined for commercial markets". It follows that while the methodology states the value of PMPi is to be updated upon each verification this value is not needed for calculations as 1) the baseline is set and 2) there is no with project harvesting of timber. Further, the current value 11.9 is the most appropriate value. This value was calculated from onsite forest inventory data which was collected at the start of the project and will be update every 10 years. Updating this value with any more recent data from state, regional, or national datasets are likely to give a less accurate value as what is "merchantable biomass" takes into account tree species, tree size, and distance to markets, which obviously are highly dependent on the specific forest type and location of the forest in relation to mills and markets.
ESI Findings - Round 2 (01/25/2016)	Finding Closed: The monitoring/measuring procedure of proportion of merchantable biomass from aboveground biomass (PMPi) is updated with each inventory of biomass. The last inventory occurred at validation and will stand until, baseline re-evaluation. The verification team agrees that the current value 11.9 is the most appropriate value, given it is likely to be the most accurate and accounts for site specific conditions.

Item Number	8
Approved VCS Module VMD0015, Version 2.1 (20 November 2012), REDD Methodological Module: Methods for monitoring of greenhouse gas emissions and removals (M-MON), Sectoral Scope 14	c. Classification accuracy assessment: Accuracy assessment technique used; coordinates and description of the ground-truth data collected for classification accuracy assessment; and final classification accuracy assessment.
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	Pending
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	MR Section 3.3 and 5, Acre2014AA.kml, 2014AA_points.xlsx

ESI Findings - Round 1 (12/01/2015)	An accuracy assessment was included in section 5 of the MR which describes the comparison between the land cover classification and ground reference points. This section adequately describes the accuracy assessment performed for the monitoring period. Spatial dispersion of accuracy assessment ground reference is reasonable. However, in review of reference points in Google Earth, verifiers note that points f22, f21, nf119, nf120, f120, nf118, f119 and many others fall within July 2013 dated Digital Globe imagery and outside of the monitoring period. Image acquisition dates used for the ground reference points are not specified. Since classification was performed by UCEGEO, it is unclear when this dataset became available for use by the PP. There is no requirement here for timeliness of ground reference data acquisition, but best practice would suggest as close as possible to classification date. The ground reference points were independently evaluated using newest available imagery in Google Earth and verifiers agree with land cover type calls. The accuracy assessment document illustrates an error matrix with 235 points for forest/non-forest classes. However, following Congalton, the error matrix has classified data on the y axis and reference data (imagery or ground truth) on the x axis. Again, there is no specific requirement here for format of the error matrix but best practice would suggest following Congalton for the layout of the error matrix. Computations for producer's and user's accuracy were thus flopped where producer's accuracy is total correctly classed samples divided by total samples in the reference (ground truth or imagery) and user's accuracy is total correctly classed samples divided by total samples in the classified data. Overall accuracy was computed correctly.
Round 1 NCR/CL/OFI	CL: Please use a closer time period classification date for generation of accuracy assessment ground reference points. Please fix the error matrix format as noted in the finding and for producers and user's accuracy in the error matrix.
Round 1 Response from Project Proponent (01/25/2016)	Points from July and August of 2013 have been replaced with new points. All ground truthing point are from within 2014. A new kml file of these points has been included in the project database. An updated spreadsheet, "2014AA_points_10_15", correcting the axis of the error matrix has been included in the project database and the monitoring report updated.

ESI Findings - Round 2 (01/25/2016)	The newly supplied Accuracy Assessment points "Acre2014_AA_points_10_15.kml" were re-reviewed in Google Earth to check imagery acquisition date. Ground reference points are now appropriately taken from imagery acquired within the monitoring period. The new ground reference points were re-checked in Google Earth against "2014AA_points_10_15.xlsx" and confirmed to have been tallied correctly. The error matrix was correctly updated to contain the new totals from classification checks. Further, the Accuracy Assessment in Section 5 of the MR is now reported correctly. The item is addressed.
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Item Number	9
Approved VCS Module VMD0013, Version 1.0 (3 December 2010), REDD Methodological Module: Estimation of greenhouse gas emissions from biomass burning (E-BB), Sectoral Scope 14	default values in Table 2.6 of IPCC, 2006 (Annex 2)
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	2014_EnviraMonitoring 2015.07.28.pdf; Envira 2014Monitoring_2015.07.28.xlsx
ESI Findings - Round 1 (12/01/2015)	The default value of 0.45 (for Primary open tropical forest) was applied for combustion factor for each stratum correctly. However, this parameter was not included in MR Section 3.1 ("Data and Parameters Available at Validation").
Round 1 NCR/CL/OFI	NCR: Please include COMFi as a parameter in MR Section 3.1 ("Data and Parameters Available at Validation").
Round 1 Response from Project Proponent (01/25/2016)	The parameter COMFi has been included in Section 3.1 of the monitoring report.
ESI Findings - Round 2 (01/25/2016)	Finding Closed: Verifiers confirm the parameter COMFi has been included in Section 3.1 of the monitoring report (2014_EnviraMonitoring 2016.01.15.docx).

Item Number	10
Approved VCS Module VMD0013, Version 1.0 (3 December 2010), REDD Methodological Module: Estimation of greenhouse gas emissions from biomass burning (E-BB), Sectoral Scope 14	Defaults can be found in Volume 4, Chapter 2, of the IPCC 2006 Inventory Guidelines in table 2.5 (see Annex 2: emission factors for various types of burning for CH ₄ and N ₂ O).
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	Y
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	2014_EnviraMonitoring_2015.07.28.pdf; Envira 2014Monitoring_2015.07.28.xlsx
ESI Findings - Round 1 (12/01/2015)	The default values for N ₂ O (0.2) and CH ₄ (6.8) were appropriately sourced from Table 2.5 of Annex 2. However, these parameter was not included in MR Section 3.1 ("Data and Parameters Available at Validation").
Round 1 NCR/CL/OFI	NCR: Please include Ggi as a parameter in MR Section 3.1 ("Data and Parameters Available at Validation").
Round 1 Response from Project Proponent (01/25/2016)	The parameter Ggi has been included in Section 3.1 of the monitoring report.
ESI Findings - Round 2 (01/25/2016)	Finding Closed: Verifiers confirm the parameter Ggi has been included in Section 3.1 of the monitoring report (2014_EnviraMonitoring 2016.01.15.docx).

Item Number	11
"Tool for testing significance of GHG emissions in A/R CDM project activities" (Version 01)	The sum of decreases in carbon pools and increases in emissions that may be neglected shall be less than 5% of the total decreases in carbon pools and increases in emissions, or less than 5% of net anthropogenic removals by sinks, whichever is lower.
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	Pending

Evidence Used to Assess (Location in PD, MR or Supporting Documents)	2014_EnviraMonitoring 2015.07.28.pdf
ESI Findings - Round 1 (12/01/2015)	The MR states that T-SIG would be deployed if illegal logging emissions were determined through a survey, and if deforestation in activity shifting leakage area occurred. Neither activity has been reported, and thus T-SIG has not been deployed. However, verifiers could not locate the survey to determine when it was conducted and if any illegal logging practices were noted.
Round 1 NCR/CL/OFI	CL: Please provide the results of the survey for illegal logging emissions to confirm that this pool is de minimis for the monitoring period.
Round 1 Response from Project Proponent (01/25/2016)	The following text was added to Section 4.2 of the monitoring report "Degradation surveys were conducted by Ayri Rando, an independent contractor hired by CarbonCo, in 2014. One hundred percent of the survey respondents indicated they utilize charcoal or timber, most of which originates from forested areas. Using conservative assumptions and further survey information on the amount of charcoal/timber collected, emissions from degradation were estimated. Degradation emission estimates were very small due to the low population pressures and insignificant amounts of charcoal and timber collected . Using the T-SIG tool, degradation emissions (657 t CO₂) are determined to be de minimis because they are less than five percent of the total GHG benefits generated during the same monitoring period (3,929,924 t CO₂), and thus are not accounted in net GHG benefit calculations. The net carbon stock change as a result of degradation in the project area ($\Delta CP, Deg, i, t$) is therefore equal to zero for the monitoring period, 2013-2014." Also the excel workbook detailing the degradation de minimis calculations were included in response to this finding. Please see ""2014_EnviraDegradation 2016.01.15.xls".
ESI Findings - Round 2 (01/25/2016)	Finding Closed: Verifiers reviewed 2014_EnviraDegradation 2016.01.15.xls, all calculations and assumptions and the amount of of degradation emissions is clearly de-minimis. Currently assuming each family harvests 2 trees a year (the results of the current survey), this would equate to 0.02% of the total GHG benefits generated this monitoring period. Site visit observations roughly agree with the number of trees harvested per year by each family. Even assuming each family was not completely truthful and harvested up to 20 trees/year, this would equate to 0.16 of the total GHG benefits generated this monitoring period (< 5%) and still clearly de-minimis. Further, new text has been added to Section 4.2 of the monitoring report describing the survey process.

Item Number	12
VCS AFOLU Non-Permanence Risk Tool, Version 3.2 04 Oct 2012	Project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	2014_EnviraMonitoring 2015.07.28.pdf; Envira Amazonia VCS Non-Permanence Risk Report 2015.04.03.pdf; CC Vanguard March 2015 statement.pdf; May 2015 CC Checking Statement.pdf
ESI Findings - Round 1 (12/01/2015)	Project has secured 100% of funding needed to cover the total cash out before the project reaches breakeven. Details are provided in a cash flow analysis. Projects may demonstrate that funding has been secured through, for example, financial statements, bank records, executed commodity purchase agreements, executed emission reduction purchase agreements, or other signed contractual agreements. Evidence shall be provided that agreement counterparties are in good financial standing, to demonstrate the ability to meet the financial obligations. Carbon co has also provided evidence of sufficient unrestricted, internal financial resources of \$763,685.86 (as of March-May 2015), which is over 100% of funding needed to cover the total cash out before the project reaches breakeven. However, it was noted that the pro forma provided (dated 07 October 2014) was not the most recent version that was corrected during validation (dated 30 January 2015), and contained the same errors that were corrected during validation.
Round 1 NCR/CL/OFI	CL: Please provide the correct pro forma workbook that contains corrections validated in the validation process.
Round 1 Response from Project Proponent (01/25/2016)	The updated proforma has been included in response to this request. The updated pro forma is entitled "Pro Forma for Envira Amazonia Project (1-30-15)"
ESI Findings - Round 2 (01/25/2016)	Verifiers confirm that the updated pro forma has been included in response to this request. (Pro Forma for Envira Amazonia Project (1-30-15).xls)

Item Number	13
VCS AFOLU Non-Permanence Risk Tool, Version 3.2 04 Oct 2012	Governance score of -0.32 to less than 0.19
Applicability to the Project (Y or N/A)	Y
Requirement Met (Y, N, Pending)	N
Evidence Used to Assess (Location in PD, MR or Supporting Documents)	2014_EnviraMonitoring 2015.07.28.pdf; Envira Amazonia VCS Non-Permanence Risk Report 2015.04.03.pdf; http://info.worldbank.org/governance/wgi/index.aspx#home
ESI Findings - Round 1 (12/01/2015)	Verifiers noted that the governance score was calculated for years 2009-2013, while the World Bank WGI website contained data through 2014. While the Political Risk rating remained unchanged whether calculated 2009-2013 or 2010-2014 (2), the AFOLU Non-Permanence Risk Tool, v3.2 states that a "governance score (of between -2.5 and 2.5) shall be calculated from the mean of Governance Scores across the six indicators of the World Bank Institute's Worldwide Governance Indicators (WGI) ¹ , averaged over the most recent five years of available data." Therefore, the five most recent years must be included in the calculations. Further, the Risk Report contains years 2008-2012.
Round 1 NCR/CL/OFI	CL: Please update governance score calculations to include years 2010-2014, and update the MR and VCS Non-Permanence Risk Report where appropriate.
Round 1 Response from Project Proponent (01/25/2016)	The governance score has been updated using 2014 data and corresponding changes have been made to the monitoring report.
ESI Findings - Round 2 (01/25/2016)	The governance score has been updated using 2014 data and changes have been added to the monitoring report. 2014_EnviraMonitoring 2016.01.15.docx (section A1.2)