



**Verified Carbon
Standard**

FAMILY FOREST CARBON PROJECT

VALIDATION REPORT

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Summary:

Forest Carbon Works, PBC is a US-based company that seeks to conserve and restore functional forestland throughout the United States for the primary purpose of increasing carbon sequestration. Forest Carbon Works plans to democratize access to carbon revenue by making carbon offset payments available to small landowners that face pressures to liquidate their timber to cover unforeseen expenses. By the year 2030, Chestnut Carbon anticipates protecting around 202,347 hectares of forest land to be locked into durable agreements for 60 years (with possible extension to 125 years) of permanent carbon storage. The Family Forest Carbon Project (“the Project”) is a grouped project whose potential geographic area encompasses the contiguous United States and southern Alaska.

The Project contrasts with regional common practice among the owners of these lands prior to project implementation: extractive timber harvesting to compensate for owner decreasing revenues. To reduce GHG emissions across the project area, the project technologies and measures include transitioning the management of forestland to sustainable, uneven-aged silvicultural systems that include group selection, patch cuts and continuous thinning, where appropriate. In these transition activities, practices include the application of special silvicultural treatments that accelerate the recruitment of trees into standing dead wood, among other treatments. By extending rotation ages (ERA) through the implementation of uneven-aged silviculture of these commercially harvestable forests, the project increases carbon storage relative to the baseline case, as well as increases biodiversity and diversity in forest structure.

The purpose of the validation was the independent evaluation of the project’s compliance with the VCS Standard v4.4 and the assessment of the ex-ante anthropogenic GHG removals that are expected to occur as a result of the project’s activities. The process was performed through a combination of document revision, interviews with relevant personnel and onsite inspections. During the validation 9 CARs and 10 CLs were reported. All these issues were appropriately closed by means of corrections, more clear explanations and other supported documents. No FARs were raised for the first verification event.

AENOR carried out a final validation report and deems reasonable the project assumptions, since it complies with all of the validation criteria for VCS. The assessment team has no restrictions or uncertainties with respect to the compliance of the project with the validation criteria. Hence, the audit team concludes that the ex-ante

GHG removals for the lands included in the project boundary have been projected in accordance with VCS rules.

AENOR can confirm that the estimated gross GHG removals are 21,149,786 tCO₂e for the whole crediting period (25 years, 14-July-2020 to 13-July-2045), for a final estimation of 202,347 hectares (increasing from the first year to 2030) protected under agreements with the owners, with an annual average of 845,991 tCO₂e, while the project longevity period is at least 60 years. Currently, this grouped project includes one instance in the United States state of Washington (30.9 hectares). At the moment of the validation, the non-permanence risk rate was 15%. AENOR considers these estimations are accurate and free of material errors and AENOR holds no restrictions or uncertainties with respect to the compliance of the project with the validation criteria.

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1 INTRODUCTION

1.1 Objective

The purpose of the validation audit activity was to conduct an independent assessment of the project in order to determine whether the project complies with the validation criteria as set out in the guidance documents listed in Section 1.2 of this report, including the monitoring procedures; and that the ex-ante GHG removals reported in the PD are materially accurate.

In accordance with the VCS Standard (see section 1.2), AENOR conducted an independent assessment of the project to determine whether the project complies with the VCS Program rules. In accordance with the VCS Validation & Verification Manual, the objectives of the validation engagement were to assess:

- The project's conformance to the VCS rules.
- The project's conformance to the applied methodology, including the procedure for the demonstration of additionality specified in the methodology.
- The likelihood that the methods and procedures set out in the Project Description will generate verifiable GHG data and information when implemented.
- The accuracy of the non-permanence risk analysis.

Independent third-party validation is a requirement for all VCS projects and is mandatory to provide assurance to Verra and other stakeholders of the quality of the project and its projected Verified Carbon Units (VCUs) generation.

1.2 Scope and Criteria

The scope of the validation audit is to validate and verify the GHG removals of the proposed Project against the Verified Carbon Standard, the identified methodology and associated tools and modules, for the crediting period from 14-July-2020 to 13-July-2045.

The objectives of this audit included a validation of the projects estimated ex ante removals with the Verified Carbon Standard requirements and any additional requirements of VCS AFOLU projects, besides the assessment of the additionality and the non-permanence risk assessment report.

The scope was defined as follows:

- The project and its baseline scenario and its additionality.
- The physical infrastructure, activities, technologies and processes of the project.
- The GHG sources, sinks and/or reservoirs those are applicable to the project.
- The types of GHGs applicable to the project.

- The project crediting period ex-ante estimations.

In accordance with Section 4.1.8 of the VCS Standard, the criteria for validation were the VCS Version 4, including the following documents:

- VCS Standard v4.4 issued 17 January 2023
- VCS Program Guide v4.3 issued 17 January 2023
- Program Definitions v4.3 issued 21 December 2022
- AFOLU Non-Permanence Risk Tool v4.0 issued 19 September 2019
- VT0001 Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities v3.0, issued 1 February 2012.
- VM0003 Methodology for Improved Forest Management Through Extension of Rotation Age v1.3, issued 16 May 2023.

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS documents.

1.3 Reasonableness of Assumptions

The validation was conducted to assess the reasonableness of assumptions, limitations, and methods that support Project Proponent' statement about the outcome of the Project' activities. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertions are materially correct and is a fair representation of the GHG data and information.

All the versions of the validation report were subjected to an independent internal technical review before being submitted to the client to confirm that all validation activities had been completed according to the pertinent VVB instructions required. The technical review was performed by a technical reviewer qualified in accordance with AENOR's qualification scheme for VCS validation.

1.4 Summary Description of the Project

Forest Carbon Works, PBC is a US-based company that seeks to conserve and restore functional forestland throughout the United States for the primary purpose of increasing carbon sequestration. By the year 2030, Chestnut Carbon anticipates protecting around 202,347 hectares of land to be locked into durable agreements for 60 years (with possible extension to 125 years) of permanent carbon storage. The Family Forest Carbon Project ("the Project") is a grouped project whose potential geographic area encompasses the contiguous United States and southern Alaska.

The Project contrasts with regional common practice among the owners of these lands prior to project implementation: extractive timber harvesting to compensate for owner decreasing revenues. Forest Carbon Works plans to democratize access to carbon revenue by making carbon offset payments available to small landowners that face pressures to liquidate their timber to cover unforeseen expenses.

To reduce GHG emissions across the project area, the project technologies and measures include transitioning the management of forestland to sustainable, uneven-aged silvicultural systems that include group selection, patch cuts and continuous thinning, where appropriate. In these transition activities, practices include the application of special silvicultural treatments that accelerate the recruitment of trees into standing dead wood, among other treatments. There is no rotation age associated with the project activity as even-aged forest management will not be practiced. Rotation ages within baseline scenarios will differ among activity instances and will be dependent on common forest management practices in the geographic area.

Sponsored by Forest Carbon Works in relation to this project, university research indicates that the promotion of standing deadwood through these treatments significantly increases total carbon storage over time, as compared to no treatment or extractive timber harvesting. By extending rotation ages (ERA) through the implementation of uneven-aged silviculture of these commercially harvestable forests, the project increases carbon storage relative to the baseline case, as well as increases biodiversity and diversity in forest structure. Diverse forest age classes and heterogeneity across landscapes are proven to increase forest resiliency to disturbances such as wildfire, landslides, and insect or disease outbreak.

AENOR can confirm that the estimated gross GHG removals are 21,149,786 tCO₂e for the whole crediting period (25 years, 14-July-2020 to 13-July-2045), for a final estimation of 202,347 hectares (increasing from the first year to 2030) protected under agreements with the owners, with an annual average of 845,991 tCO₂e, while the project longevity period is at least 60 years. Currently, this grouped project includes one instance in the United States state of Washington (30.9 hectares). At the moment of the validation, the non-permanence risk rate was 15%.

2 VALIDATION PROCESS

2.1 Method and Criteria

The validation was performed through a combination of document review, interviews with relevant project personnel and stakeholders and an onsite inspection, as discussed in Sections 2.2 through 2.4 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure that the project was in full conformance to all requirements.

A project specific sampling plan was developed to guide the validation auditing process to ensure efficiency and effectiveness. The purpose of the sampling plan was to present a risk assessment for determining the nature and extent of the validation procedures necessary to ensure the risk of auditing error was reduced to a reasonable level. The validation sampling plan methodology was derived from all items in VVB' auditing process stated above. Specifically, the sampling plan utilized the VCS guidance documents and ISO 14064-3:2019.

Based on these analyses and considering the requirements of the GHG program used, the sampling plan considered the following topics:

- Project proponent, developers/management team, local team onsite.
- Baseline scenario and additionality.
- Project activities to be conducted as part of the project design.
- Monitoring procedures. Monitoring team and equipment.
- Review of operation and measurement records. Controls established to detect and correct any error or omission in monitoring parameters when applicable.
- Carbon calculations. Estimates and assumptions for determining GHG ex ante data.
- Project rights and legal requirements.
- Financial issues, financial sustainability.
- Stakeholders consultation process
- Project conflicts, barriers, or difficulties.
- Project Communication & Grievance Mechanism
- Benefit permanence (mid and long term) and non-permanence risks.
- Eligibility conditions and compliance of validated instances.

The sample methods assessed the project components that match with key characteristics in the entire documentation to be examined and the requirements of the VCS. In addition, sampling was designed to yield insights and observation that closely align with the real context onsite, the current project status and its alignment with the validated project documentation. The sampling included to check the quantity and type of evidence below:

- To carefully review the Project Description and supporting documentation for conformance to the validation criteria.
- To examine the baseline data gathered from the determined baseline for Project's region, spreadsheets used to enter, and compile information required by the methodology.
- To reproduce 100% of sheets in the PD and the spreadsheets for the crediting period for the project area crosschecking with used methodology requirements.
- To check 100% the project boundary and land covers in the project area for the validated PAIs using the GIS database.
- To check values of the carbon stocks, and the land used classes in the project area.
- To review the NPRR and supporting documentation for conformance to the validation criteria and consistency with the PD.

Any modifications applied to the validation sampling plan were made based upon the conditions observed during the audit in order to detect the processes with highest risk of material discrepancy.

The validation activities in which risks were assessed were the evaluations of the applicability, baseline scenario, additionality, leakage, non-permanence risk analysis, monitoring system, safeguards, etc.

The validation activities in which risks were assessed were the evaluations of the monitoring system (data flow, data control procedures, etc.) but mainly the quality of raw data as well as sources and the spreadsheet calculations. AENOR reproduced 100% of workbooks for the crediting period (14-July-2020 to 13-July-2045). The project boundaries for the validated PAI (Project Activity Instance) were 100% checked using the GIS database.

The ex-ante carbon stock changes, and the land used classes in the project area were also 100% crosschecked. For data provided for the reference region, AENOR requested onsite samples of data.

AENOR carried out a deep and meticulous review of the spreadsheets in order to verify the correct application of the methodology (formulae, equations, etc.) and checked that data required calculating the GHG removals were appropriately provided.

AENOR confirms that sufficient evidence was presented for the reported ex ante net anthropogenic GHG removals and that there is a clear audit trail that contains the evidence and records that validate the stated figure in this validation report since:

- Sufficient evidence available: The project participant has provided the 100% of data used in the calculations to achieve the final amount of GHG removals expected.
- Nature of evidence: The raw data were collected from reliable sources. They are detailed in the project documents and have been provided to the audit team and were checked during the interviews.
- Cross-checked evidence: AENOR cross-checked the collected information through interviews with stakeholders and reproducing calculations.

Hence, AENOR confirms that the stated figures in Project Description are correct and confirms that is able to certify the ex-ante net anthropogenic GHG removals based on verifiable and reliable evidence.

The validation schedule was as follows:

Activity	Date
PP sent information to VVB and kick-off meeting	05 June 2023
Audit plan and completeness check to verify all the information requested was provided.	07 June 2023
Onsite audit inspection	15-16 June 2023
Two rounds of findings, with corrective action requests or clarification requests raised	31 July 2023 to 29 August 2023
Technical internal review (AENOR) and delivery of VCS	29 September 2023

validation report to PP for its revision	
Delivery of response to Verra accuracy review	First round: 18 December 2023 Second rnd: 31 January 2024

2.2 Document Review

The PD submitted by the Project Proponent (PP) was reviewed against the approved methodology and against VCS requirements. Additional background documents related to the project design, baseline, ownership, project start date and additionality were also made available before, during and after the onsite visit, along with the non-permanence risk report. Other documents reviewed included data from monitoring, carbon rights contracts, management agreements, maps and GIS database, monitoring and grievance SOPs, biomass and carbon calculation spread sheets, etc. All documents were provided digitally to the audit team.

To address the corrective actions and clarification requests that arose from the desk review and onsite visit, the PP revised the project PD version 1.1 (dated on 30 May 2023) and developed a final version 1.6 dated on 23 January 2024.

The list of all documents reviewed from the client for this validation is the following. Note that along this report, supporting evidences (documents, interviews, on site visit activities) are referred by its Reference number in the first column of the lists in sections 2.3 and 2.4, as well as the onsite visit activities carried out and reported in section 2.5.

Reference	File name (last version provided)
PD	Family Forest Carbon Project PF v1.6
Annex A	IF12001 - Congressional Report 2021
Annex B	Ecosphere - 2016 - Stephens - US Federal Fire and Forest Policy Emphasizing Resilience in Dry Forests
Annex C	Talley, J. L., J. Schneider, and E. Lindquist. 2016. A simplified approach to stakeholder engagement in natural resource management: the Five-Feature Framework. Ecology and Society 21(4):38.
Annex D	Forest Management Lease Agreement PAI 1024 (MLA_Signed_PAI1024)
Annex E	Washington State Forest Practices Act (chapter 76.09 RCW)
Annex F	Washington State Forest Practices Rules (Title 222 WAC)
Annex G	Global Indicator Framework after 2023 refinement_Eng
Annex H	- Timber Management Plan, Skagit County, WA. - PAI 1024 - Comparable Harvest Materials Comparison.xlsx - Comparable Harvest Shapefile

Annex I	Fire as Management Tool Policy v1.1
Annex J	Forest Harvests and Wood Products: Sources and Sinks of Atmospheric Carbon Dioxide. Jack K. Winjum, Sandra Brown, and Bernhard Schlamadinger. 1998.
Annex L	- 2022 Forest Cruiser Training v1.1.pptx - Nephos Digitization Manual.pdf by Forest Carbon Works
Annex M	Harmon, Mark E.; Woodall, Christopher W.; Fasth, Becky; Sexton, Jay; Yatkov, Misha. 2011. Differences between standing and downed dead tree wood density reduction factors: A comparison across decay classes and tree species. Res. Pap. NRS-15. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 40 p.
Annex N	Tax Parcels and Project Area of PAI 1024
Annex O	IPCC, Good Practice Guidance for Land Use, Land –Use Change and Forestry, 2003
Annex P	- U.S. Forest Projects (June 25, 2015) - Volume and Biomass Equations for Forest Offset Projects in All States Except Alaska, California, Oregon, and Washington - Regional biomass equations used by FIA to estimate bole, bark, and branches updated 09-19-2014 (biomass.equations.ca.or.wa) - FIA Volume Equation documentation updated on 9-19-2014 (volume.equations.ca.or.wa)
Annex Q	PD-Table 4.4 v0.3
Annex R	- FCW 5-year MLA Offer Packet Template v1.10 - no back payment - FCW Stakeholder Engagement Plan v1.0
Annex S	NCX - Verra Communication.pdf
Annex T	FCW Conserve Adaptive Management Plan v1.0
Annex U	- FCW VCS Certification Model.xls - Kimmeridge Carbon Solutions, L.P. and Chestnut Carbon LLC Proof of Funds.pdf
Annex V	- FCW Conserve Risk-Report-Calculation-Tool-v1.0 – PNW - FCW Conserve_Non-Permanence-Risk-Report v1.1 - PNW
Annex W	Civil Rights Act of 1964 (Public Law 88-352, 78 Statute 241)
Annex X	Americans with Disabilities Act (42 U.S.C. § 12101 et seq.)
Annex Y	Fair Labor Standards Act (29 U.S.C. § 201 et seq.)
Annex Z	Occupational Health and Safety Act (29 U.S.C. § 651 et seq.)
Annex AA	Federal Water Pollution Control Act (33 U.S.C § 1251 et seq.)
Annex AB	Endangered Species Act (16 U.S.C. § 1531 et seq.)
Annex AC	National Environmental Policy Act (42 U.S.C. § 4321 et seq.)
Annex AD	QAQC Reference V1.0
Annex AE	- The Fire and Fuels Extension to the Forest Vegetation Simulator: Updated Model Documentation - Lying Dead Reference Table, USDA FS, pp295-296.png

Annex AF	- ARB Compliance Offset Protocol U.S. Forest Projects. Adopted: June 25, 2015. - assessment.area.data.file.xls
Annex AG	- Kazemian, S. (2018). Organic Soils and Peats. In: Bobrowsky, P.T., Marker, B. (eds) Encyclopedia of Engineering Geology. Encyclopedia of Earth Sciences Series. Springer, Cham.
Annex AH	FCWConservePDAdditionality_NPV_v4.0
Annex AI	FCW Conserve TL v0.12 - PAI 1024 - No URS
Annex AJ	FCW Conserve TL v0.12 - PAI 1024
Annex AK	FCW Conserve Ex-Post Accounting Model v0.3
Annex AL	FCW Conserve Ex-Post Accounting Model v0.3 - No URS
Annex AM	FCW Conserve Model Results v1.0 - PAI 1024 - No URS
Annex AN	FCW Conserve Model Results v1.0 - PAI 1024
Annex AO	Physical Soil Properties (WA) Skagit County Area, Washington
Annex AP	FCW Conserve Implementation Plan v1.0
Annex AQ	No Public Comments Evidence from Verra.pdf
Annex AR	- FCW Membership Guide July 2023.pdf - Conserve Harvest Policy.pdf
Annex AS	PAI 1024 Modeling Units Shapefile
Annex AT	Evidence of Project Ownership: - Property Deed & Easement 1.6.23.pdf - Additional Property Deed & Easement Language 1.6.23.pdf - Skagit County recorded survey.jpg - Utility Easement 1.jpg - Utility easement 2.jpg
Annex AU	- PAI 1024 Forester Attestation.pdf - Resume – Attesting Forester – 2023.pdf
Annex AV	FCW Landowner License Agreement
Annex AW	UMN – Research Statement 2022
Annex AX	Specific Gravity and Other Properties of Wood and Bark for 156 Tree Species Found in North America
Annex AY	Global Forest Resources Assessment 2020 - Terms and Definitions FRA 2020
Annex AZ	- PAI1024 Landowner Parcels - PAI1024 Email Confirmation
Annex BA	Estimated Discount Factor at the time of MP1 Verification.xlsx
Annex BB	- Forest Carbon Works Conserve Peat Policy - Peat Methodology.docx

	- USA SOIL Map Units.json
Annex BC	PAI 1024 Plot/Plotgrid Shapefiles
Annex BD	FCW Conserve – Sample Size Justification (PAI 1024)
Annex BF	Forest Biometrics Research Institute. The Economic Results of a PNW Silvicultural Costs Survey
Annex AG	FVS Files
Annex AO	FCW Conserve Baseline Wood Products v1.0.xlsm
Annex BE	FCW Conserve Lying Dead by PIA v1.0.xlsx
Annex 1	Site visit: - PAI1024_SiteVisitPlots.shp - FCW Conserve Validation Site Vist Tree List v1.0.xlsx - PAI1024_InventoryMap+GateLocation.pdf
Annex 2	FVSwc_Overview. Keyser, Chad E., comp. 2008 (revised December 22, 2022). Westside Cascades (WC) Variant Overview – Forest Vegetation Simulator. Internal Rep. Fort Collins, CO: U. S. Department of Agriculture, Forest Service, Forest Management Service Center. 85p.

2.3 Interviews

AENOR validation team conducted interviews with project proponents and associates regarding the work products provided to the audit team in support of the PD and NPRR; actions undertaken to ensure conformance with various requirements; and project activities as planned and implemented. The following personnel associated with the project proponent were interviewed:

Reference	Name	Affiliation	Role	Date(s) Interviewed
Interview #1	Julian Bauer	Forest Carbon Works	Director	15-16 June 2023
Interview #2	Alani Worden	Forest Carbon Works	Carbon Analyst - Tree List Workbook	15-16 June 2023
Interview #3	Galen Maennicke	Forest Carbon Works	Carbon Analyst - Model Results Workbook	15-16 June 2023
Interview #4	James Stratford	Forest Carbon Works	Associate forester Pacific Northwest	15-16 June 2023
Interview #5	David R. Fuller Sherrilynne Fuller	Owners of the PAI and management responsible	-	15 June 2023
Interview #6	Michael G. Olson	Roots Forestry	Forester	29 August 2023

		Consulting, LLC		
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It is important to clarify that the PP identified only the neighbors as the local stakeholders that could potentially be affected in the future at a time of project expansion, but today, with the PAI that has been included, they are not considered for consultations since at the moment they have no relation to the project and are not affected. On the other hand, AENOR confirmed that given the nature of the project (private properties with private management, where the project activity will be passive -non-intervention- and that does not request any specific permission from the Government, in a context of current PAIs dispersed in a vastly agricultural-cattle ranching landscape) the number of stakeholders is limited. For example, in practice, for the current PAI, no local policy makers, groups of women or minorities, or third parties with any rights over the project properties that have or potentially could have any affectation by the project have been identified; and this, according to the onsite visit and rest of the interviews is consistent. That said, the consideration of the neighbors as the only local stakeholder deems correct, but either way the list of stakeholders is expected to be constantly updated.

2.4 Site Visits

The objectives of the on-site inspections performed were mainly to cross check the description provided in the PD, particularly:

Reference	Onsite activity
Activity #1	Ensure that the geographic area of the project, as reported in the PD and the accompanying geodatabase base is in conformance with Section 3.11.2 of the VCS Standard. For this, the only PAI (internal identification is #1024) currently included was visited , where the limits of the properties and land uses and identified strata were reviewed in accordance with the defined carbon accounting areas, being in accordance with what was reported in the PD. It was also observed that the boundaries were marked and there signs indicating the PP contact details in case of comments or grievances.
Activity #2	Select samples of data and information for validation in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by VCS Standard v4.4, including the measurement of at least 10% of the inventory plots. 5 inventory plots were randomly surveyed out of the 37 plots carried out by FCW (13%) which covered the two identified measurement strata (mixed forest and riparian forest) in the only PAI (Project Activity Instance) currently included. In the measurement, no significant difference was obtained with the values used in the verified inventory. Plots measured in the unique PAI #1024 (see section 3.3.6 in this report regarding the two-level stratification process): - PlotID 1; Strata 1 (Internal number for the Measurement stratum #102402,

	mixed forest); X= -121.587 Y=48.4654 - PlotID 2; Strata 1 (#102402, mixed forest); X= -121.589 Y=48.4652 - PlotID 3; Strata 2 (Internal number for the Measurement stratum #102401, riparian forest); X= -121.599 Y=48.4658 - PlotID 4; Strata 1 (#102402, mixed forest); X= -121.593 Y=48.4642 - PlotID 5; Strata 1 ((#102402, mixed forest); X= -121.601 Y=48.4657
Activity #3	Observe the PP's evidence and collect and record data in order to assess whether data collection techniques conform to the monitoring plan and related documentation and to evaluate data quality control systems. During the measurement of plots, it was observed that the staff was correctly trained and followed the monitoring procedures reported in the FCW protocol.
Activity #4	Assess the potential implementation of the project activities reported: the only activity to be implemented is the conservation of forest areas, confirming that no commercial harvesting activity will be carried out so far, except any maintenance activity (clear cuts, patch cuts, seed tree, continuous thinning or group selection practices).
Activity #5	Carry out interview with stakeholders in order to cross check the documentary information provided. Given the nature of the project, the stakeholders involved are limited: the technical team and the owner were interviewed.
Activity #6	Perform a risk-based review of the project area to ensure that the project conforms to all other requirements of the VCS rules and the methodology.
Activity #7	Walkthrough of project calculations in order to give audit team a chance to follow the process and where to find key information in the documents provided, from the GIS and inventory design and data collection to the ex-ante VCUs expected (baseline, removals, emissions, leakage, uncertainty), through the methodology, associated tools and SOPs.

In fulfillment of the above objectives, the Team Leader performed an on-site inspection of the project area during 15-16 June 2023 observing the project area and vicinity to assess whether conditions are as described in the PD.

2.5 Resolution of Findings

All documentation provided by the PP was assessed against the applicable version of the relevant VCS guidance document listed in section 1.2 of this report. Several clarification requests (CL) and corrective action requests (CAR) were raised and submitted to the PP, which addressed them either by providing to the audit team with the requested information or by making the appropriate corrections. Updated

versions of the documentation were submitted by the PP and the audit team reassessed them against the guidance documentation. This process was repeated iteratively until all CAR and CL were fully closed. Specifically, 9 CARs and 10 CLs were raised and properly closed.

All findings issued by the AENOR audit team during the validation process have been closed. In accordance with Section 4.1.16 of the VCS Standard v4.4, all findings issued during the validation process, and the inputs for their closure, are described in Appendix of this report.

2.5.1 Forward Action Requests

No Forward Action Requests were raised to the PP during this process.

3 VALIDATION FINDINGS

3.1 Project Details

3.2.1 Project type, technologies and measures implemented, and eligibility of the project

The audit team has the following conclusions regarding the project type and technologies and measures that constitute the project activities:

- The project falls under Sectoral Scope 14 - Agriculture, Forestry and Other Land Use (AFOLU). The project category is Improved Forest Management, activity is Extended Rotation Age (IFM ERA).
- The project area was previously managed using even-aged harvesting techniques such as clear cuts with no extension of rotation age. The project technologies and measures include extension of rotation age using group selection, patch cuts and continuous thinning to promote uneven-aged management. Thus, the technologies and measures implemented, as described in Section 3 of the PD, are likewise eligible under the VCS Program.
- Discussion regarding the project's eligibility under the VM0003 methodology can be found in Section 3.3.2 below.

The audit team finds that the project meets the eligibility requirements of the VCS Program because it meets the additionality test (as discussed in Section 3.3.5 below) and complies with all applicability conditions of the selected methodology (as discussed in Section 3.3.2 below). Last, it was confirmed by AENOR that the project is not located in a jurisdiction covered by the REDD+ program.

3.2.2 Project design, including eligibility criteria for grouped projects

This project is a grouped project that will consist of multiple Project Activity Instances (PAIs) within the geographic area of the contiguous United States and southern Alaska. Addition of PAIs shall meet all eligibility criteria defined in Section 1.4 of the PD.

AENOR validated that the eligibility criteria include compliance with methodology applicability conditions, same baseline scenario and additionality proof, among others, as the Methodology VM0003 v1.3 (section 4) and the VCS standard 4.4 (sections 3.6.16 and 3.6.17) requests, therefore that the eligibility conditions defined by the PP for the addition of PAIs are complete and adequate.

The eligibility criteria also include the compliance with the baseline scenario and the project scenario (whose harvesting techniques are defined in VM0003 v1.3 applicability condition #1, assessed in section 3.3.2 of this report), considering the silvicultural system and harvesting techniques as follows:

	Silvicultural system	Harvesting techniques	Means of verification by VVB
Baseline scenario	Even-aged	- Clear cuts - Seed-tree - Shelterwood - Other even-aged techniques	- Compliance with Eligibility criterion 6 (Annex D) - Interview with independent forester and his attestation (Interview #6) - Interview with PP and owner (Interview #1-5). - Onsite visit (Activity #2, 4).
Project scenario	Uneven-aged	- Continuous Thinning - Group Selection - Patch Cuts - Other uneven-aged techniques	- Compliance with Eligibility criterion 5 (Annex D) - Interview with independent forester and his attestation (Interview #6) - Interview with PP and owner (Interview #1-5). - Onsite visit (Activity #2, 4).

It is important to note that, as treatments in the project scenario will be uneven-aged, the concept of 'rotation age' in the project scenario is not applicable, as intermediate treatments serve to delay the rotation age indefinitely. Uneven-age treatments inherently extend the rotation age beyond the lifetime of the project because they are not even-aged rotations. On the other hand, the rotation age in the baseline scenario is not known.

The initial Project Activity Instance (PAI) is 1 (in Washington State, in the United States of America). AENOR validated compliance of this PAI with the Eligibility criteria for grouped project defined by the PP (Section 1.4 of the PD).

3.2.3 Project proponent and other entities involved in the project

The audit team has the following conclusions regarding the project proponent and other entities involved in the project:

- The Project Proponent (PP) is Forest Carbon Works, PBC (FCW) who has been identified in section 1.5 of the PD.

- There are no other entities involved in the project.

The audit team agrees with the identification of FCW as the PP as it is the entity that has been granted control and rights of emission reductions generated through each project activity instance. FCW is tasked with management and oversight of the project activity and has overall control and responsibility for the project. The audit team confirmed this information during interviews #1 and #5, and revision of the Forest Management Lease Agreement's in Annex D (signed by FCW and the PAI owner) for the only PAI included. The audit team finds that contact and entity information provided in the PD conforms to the VCS requirements.

3.2.4 Ownership

Carbon rights are owned in fee and the right to claim GHG emissions reductions or removals is assigned to the PP (Forest Carbon Works, PBC), which is also an Eligibility Criterion (2b) to join the Project as a PAI.

AENOR confirmed this through the individual agreements between the PP and property private owner (Forest Management Lease Agreement) in Annex D for the current PAI, as well as the private owner property deeds in Annex AT; and during interviews with FCW (Interview #1) and the owners (Interview #5). AENOR confirmed that the Membership Lease Agreement –MLA- comply with Section 3.7.1 of the VCS Standard v4.4 by providing “an enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent”, then the ownership was proved.

3.2.5 Project start date

The project start date of an AFOLU project is the date on which activities that led to the generation of GHG emission reductions or removals are implemented. Then, the project start date is 14th July 2020, which corresponds to the date in which the first PAI license agreement by the landowner was signed and then date on which emissions reduction and removals first occurred: the license agreement is legally enforceable and demonstrates divergence from the common practice baseline to the ERA project activity as of its effective date. Proceeding the effective date of the license agreement (Annex AV) is the execution of the MLA.

AENOR checked with the submitted records (Annex AV: Landowner License Agreement for PAI #1024 signed on July 14th 2020; confirmed also during interviews #1 and 5#) that established date is appropriate and consistent. Then, in opinion of AENOR Project start date is considered reasonable and correct based on the VCS requirements for start date established in Section 3.8 of the VCS Standard v4.4.

3.2.6 Project crediting period

The crediting period of the grouped project is 25 years-long, from 14th July 2020 (Project start date) to 13th July 2045. The crediting period can be renewed as may be allowed under VCS.

According to Section 3.9.3 of the VCS standard v4.4, the crediting period of AFOLU projects will have a minimum of 20 years and a maximum of 100 years. Therefore, the project activity is in line with the length of the crediting period.

In this regard, AENOR can confirm that PP have developed credible and robust plan for managing and implementing the project over the crediting period in compliance with Section 3.9.4 of the VCS Standard, as described in the FCW Membership Guide (Annex AR) as forest management guidelines. This membership guide is legally enforced by the MLA (Annex D), which serves as the easement that prohibits commercial harvesting for the duration of the crediting period, unless the PAI is later certified to FSC (Eligibility Criterion 7), and as it is known by the owners of PAI #1024 (Interview #5).

3.2.7 Project scale and estimated GHG emission reductions or removals

The project is classified as “large project” according to its scale (Greater than 300,000 tonnes of CO₂e per year), since it will remove an average of 845,991 tCO₂e per year during the 25 years of crediting period. The ex-ante estimate considers an increase in the PAIs from the initial 30.9 ha validated to 202,347 forested hectares from 2030 onwards.

3.2.8 Project location

The audit team has the following conclusions regarding the project location:

- The project is a grouped project whose potential geographic area encompasses the contiguous United States of America and southern Alaska, as described in section 1.12 of the PD.
- The current validated PAI (#1024) located in Washington State. AENOR confirmed its location through the GIS data base provided (Annex AS, N), as well as during the onsite visit (Activity #1). A KML file of the project area has been provided and is also available on the Verra registry.

Thus, AENOR confirms that the Project location complies with requests in section 3.11 of the VCS Standard v4.4.

3.2.9 Conditions prior to project initiation

The audit team has the following conclusions regarding the conditions existing prior to project initiation:

- The audit team confirmed that the baseline land-use conditions prior to project initiation are documented in section 1.13 of the PD and are the same as the baseline conditions, which were confirmed as part of the additionality check described in section 3.3.4 and 3.3.5 of this report.
- The baseline scenario refers to a business-as-usual forestry even-aged management that includes extractive timber harvesting to compensate for owner decreasing revenues, in contrast to the project scenario: silvicultural systems with extended rotation ages through the implementation of uneven-aged silviculture of these commercially harvestable forests.
- The audit team confirmed these conditions during interviews with project personnel and document revision (see findings in section 3.3.4 and 3.3.5 of this report).

3.2.10 Project compliance with applicable laws, statutes and other regulatory frameworks

The audit team has the following conclusions regarding the compliance of the project with all applicable laws, statutes, and other regulatory frameworks:

- The project activities, as described in section 1.11 of the PD comply with relevant laws, statutes, and other regulatory frameworks in USA and Washington States where the current only PAI is located.
- The audit team confirmed through interviews (#1-6) with project team members, owner and external forester, and through the review of the relevant national and local laws described in section 1.14 of the PD that the PP provides sufficient assurance that the project compliances with these applicable laws, statutes and other regulatory frameworks (Annexes W, X, Y, Z, AA, AB, AC).

3.2.11 Participation under other GHG programs:

The project only pursues registration under the VCS program. According to the revision of other program registries, it is confirmed the Project does not present any overlap with any other initiative in the territory.

AENOR confirms that the project has not been registered nor is seeking registration under other GHG program, nor has it been rejected by other GHG program, as confirmed through a risk-based internet review in other program registries, interview with PP (Interview #1) and description in PD (section 1.15.1 and 1.15.2).

Where a landowner of a project activity instance was previously under contract with the Natural Capital Exchange (NCX), landowner shall provide copies of all contracts between landowner and NCX prior to the first verification event, in accordance with Eligibility criterion 8 to identify the term of such agreement.

The PP shall not claim credit for any GHG emissions reductions or removals previously claimed by NCX as guaranteed by the establishment of the PAI crediting start date upon termination of the agreement. Then, the PAI crediting period start date may only commence following the latest termination date of agreements. Under no circumstances shall the PAI crediting start date precede the latest effective date of the NCX agreements. This clarification was provided to the PP by Verra staff by email in December 2022 (Annex S. NCX - Verra Communication.pdf) as confirmed by AENOR and it clearly know by the PP (Interview #1).

In the case of the validated PAI #1024, it had not previously been under contract with NCX, as confirmed by AENOR during the interview with owner (Interview #5) and public registry search.

3.2.12 Other forms of credit and supply chain (Scope 3) emissions

The audit team confirmed that the Project is not currently participating in any emission trading or other binding limit program or mechanism, as confirmed through discussion with project personnel (Interview #1), and review of section 1.16.1 of the PD.

The audit team confirmed that the Project has not sought or received another form of GHG-related environmental credit, including renewable energy certificates, as confirmed through discussion with project personnel (Interview #1), and review of section 1.16.2 of the PD.

Family Forest Carbon Project is enrolled under sectoral scope 14: Agriculture, Forestry and Other Land Use (AFOLU). Inventory emissions are not considered under sectoral scope 14. Thus, no issuance of public statements or email notification proceeds.

3.2.13 Sustainable development contributions

The audit team has the following conclusions regarding the project's sustainable development contributions:

- The PP aims to contribute to the following three SDGs: 6 (Clean Water & Sanitation), 13 (Climate Action), and 15 (Life on Land), related to the following activities: 1) 30.9 ha (with an area to reach 202,347 ha) of forest areas protected from harvesting (evidenced in Annexes AR, D and AV) according to regarding legally-binding long-term agreements (or under FSC-certified sustainable forest management when it proceeds according to Eligibility criterion 7), 2) GHG removals due to the implementation of extended rotation age (evidenced in the PD and this report, since it is the main objective).

The PP has demonstrated its contribution to the SDGs, their monitoring and reporting, and their alignment with the achievement of the national SDGs for the USA.

3.2.14 Additional information relevant to the project, including

Leakage management for AFOLU projects

The audit team has the following conclusions regarding the project's leakage management strategy:

- As per the applicability conditions, leakage due to activity shifting is not permitted. No activity-shifting leakage will occur in the project per Eligibility Criteria (2d, 5): it is required all forested lands to be enrolled in the project (checked by the VVB in Annex D: Forest Management Lease Agreement of PAI #1024 in Exhibit A); and it is prohibited harvesting on any forested lands, whether or not enrolled in the project (checked by the VVB with the signature of the legally binding agreement required in the Annex D: Forest Management Lease Agreement of PAI #1024).
- Market effects leakage will be monitored per Section 4.3 of the PD according to VM0003 v1.3 (see sections 3.3.6 in this report).

The audit team concludes that leakages values have been applied appropriately by the project proponent.

Commercially sensitive information

The audit team confirmed through a series of interviews with the PP staff and the revision of the project's commercially sensitive documents that the information disclosed below as commercially sensitive is in conformance with the requirements in VCS Standard v4.4 and VCS Registration and Issuance Process v4.3.

The following list of information was provided to the audit team upon request, and has been excluded from the public access of the PD, although properly provided to the VVB for its assessment:

Document	Justification for its confidentiality
Annex U. FCW VCS Certification Model.xls	It contains proprietary financial information as evidences evidence for the Financial Viability section of the Non-Permanence Risk Report. Either way, its conclusions are indicated in the PD (and in section 3.4 of this validation report).
Annex U. Kimmeridge Carbon Solutions, L.P. and Chestnut Carbon LLC Proof of Funds.pdf	
Annex AH. FCW Conserve PD Additionality NPV_v1.0	It contains proprietary financial information related to the project proponent's internal project development costs. Either way, its conclusions are indicated in the PD (and in section 3.3.5 of this validation report).

Overall conclusion regarding the description of the project in the PD:

It is considered by AENOR that the project description elements described in the PD are accurate, complete, and provide an understanding of the nature of the project. Although the project is likely to achieve estimated GHG emission reduction or removals, actual results (ex-ante) may vary since the estimates are based on assumptions that are subject to change.

3.2 Safeguards

3.2.1 No Net Harm

The PP did not identify potential negative environmental and socio-economic impacts, and then no steps to mitigate them are needed. AENOR verified during the onsite visit:

- Because the project activity limits commercial harvesting and any commercial harvesting requires FSC certification, the project will have positive outcomes for both climate change mitigation. These include increased carbon storage and sequestration, as well as biodiversity impacts through the preservation of key habitats.

Community-focused project activities are aimed at increasing economic growth in the area (carbon payments to landowners ensure that over the course of the project, landowners can earn profit on their forest land equal to or exceeding those from timber sales) while keeping a specific focus on improving the lives of the community members to the extent possible, given the characteristics of the project (private properties with private management, where the project activity will be passive: principle of non-intervention).

Besides the onsite visit, the audit team conducted interviews with the PP (Interview #1) and the current PAI owner (Interview #5), who has already been participating in the project and confirmed that no negative environmental or socioeconomic impacts have been experienced thus far, as described in Annex T. FCW Conserve Adaptive Management Plan v1.0. Either way, if at some point any stakeholder identifies any negative impact, FCW has developed a grievance structure should community members have complaints or comments (see Section 3.2.5 below).

3.2.2 Local Stakeholder Consultation

The audit team obtained the following conclusions regarding the local Stakeholder Consultation in relation to what is required by VCS Standard v4.4 (3.18.3 – 3.18.5):

- The PP has identified the relevant stakeholders for the Project (Annex T. FCW Conserve Adaptive Management Plan v1.0). AENOR confirmed that given the nature of the project (small private properties with private management, where the project activity will be passive -non-intervention- and that does not request any specific permission from the Government) the number of stakeholders is limited: mainly landowners and their neighbors in case they submit a grievance. The list of stakeholders is expected to be constantly updated, according to Annex R and Annex T.
- Given the nature of the owners (small dispersed owners), the consultation is carried out one-to-one by email, telephone and in person. In addition, they receive from FCW the necessary informative documentation (Annex R. FCW Membership Offer, and Annex AR. FCW Membership Guide), in the form of a manual, which includes information about the project design and implementation, risks, costs and benefits, relevant laws and regulations and the process of VCS Program validation and its site visit. This information is also included on the FCW website (<https://forestcarbonworks.org/>). For PAI #1024, AENOR verified that the communications (mails) and distributed material (Annex R and AR) included said information, which was confirmed to be known to the owners (Interview #5).
- Regarding PAI #1024, according to the documentary evidence presented (private communications by mail) and the interview with the owners (Interview #5) the comments were positive, and beyond the impacts of the project, they focused on the interest of other neighbors in the surroundings for their participation. No potential negative impacts were reported yet from the owners. On the other hand, when a PAI joins the Project, visible signs are located in the boundaries of the property, as it was checked during the onsite visit (Activity #1), this way if any neighbor had any complaints or comments, they could get it to FCW.

So, in the opinion of AENOR, the PP has taken due account of all and any input from the PAI #1024, and has provided an adequate response, however these comments did not imply changes in the PD. Finally, similar procedures will be used when other entities join the project.

- The consultation with PAI #1024 (as will be done with the PAIs that are included in the future) was carried out in a culturally appropriate manner: in person, by phone or by mail, and in English, as requested by VCS Standard v4.4 3.18.20.
- The project proponent has established mechanisms for ongoing communication with local stakeholders to allow them to raise concerns about potential negative impacts during project implementation: 1) FCW website (<https://forestcarbonworks.org/>) allows for comments to be

submitted at any time, 2) and the Project website also includes a formal grievance process. Future stakeholder meetings are planned to occur periodically, according to Annex R (FCW Stakeholder Engagement Plan v1.0) with different key locations in mind as well as virtual and in-person formats in order to maximize participation.

The audit team concludes, overall, that sufficient and effective stakeholder input was received for the design and development of this Project and was taken into account appropriately: while the process has been carried out adequately for the current PAI #1024 validated, means and procedures are in place for future instances.

3.2.3 Environmental Impact

An environmental impact assessment is not legally required for the Project. In any case, the PP plans to assess the environmental impact according to small and low intensity managed forest guidance required by the FSC Forest Management Standard v1.0 Indicator 6.1.a (checked by VVB in FSC website) since the properties have to be FSC certified prior to begin harvesting (Eligibility criterion 7). Since the objective is the conservation of the forest area (versus the productive use in the baseline scenario), environmental impacts are not expected. If harvesting is approved for specific PAIs, forest management plans will follow the FSC guidelines, and then mitigation measures would be implemented.

In conclusion, in AENOR's opinion, conservation activities do not have environmental impacts and in the case of forestry activities, these would be sufficiently mitigated by the FSC forest management plan and its annual audit, and it will be verified by the VVB during the monitoring periods.

3.2.4 Public Comments

The project summary was exposed to public consultation on Verra's website from 12 May 2023 to 11 June 2023. During the period no public comments were received. The audit team reviewed the email sent by Verra to confirm this fact (Annex AQ).

3.2.5 AFOLU-Specific Safeguards

The steps taken to assess against the requirements of Sections 3.18.11-3.18.20 of the VCS Standard are as follows:

Element	Element assessment by the VVB
The local stakeholder identification process and the description of results.	The PP has identified the relevant stakeholders for the project in the Adaptive Risk Management Plan (Annex T), following the requests of VCS Standard v4.4 (3.18.12, 3.18.14). AENOR confirmed that given the nature of the project (small private properties with private management, where the project activity will be passive -non-intervention- and that does not request any specific permission from the Government) the number of stakeholders is limited: - Landowners (main stakeholder): the owners of the

	PAIs have all property and use rights over the land included in the Project. - Neighbors (secondary or potential stakeholder): only in case they submit a grievance or a comment regarding the Project, given that although they could have some comments/complaints (submitted through the communication channels mentioned in the last row of this table), they have in general no right of ownership or use over the included lands. The list of stakeholders is expected to be constantly updated, according to Annex R and Annex T.
Risks to local stakeholders due to project implementation and how the project will mitigate such risks.	An adequate assessment of environmental and social risks was carried out, however none have been identified at this time. In the interview with the owners of PAI #1024, no risk was mentioned. According to the Stakeholder Engagement Plan (Annex R), if any impacts arise during the lifetime of the project, FCW will mitigate them. AENOR confirms that at the moment no risk mitigation measures are necessary, given that none are probable. FCW staff has relevant carbon project development and forest management expertise, as demonstrated during the interviews (Interviews #1 to #4) and FCW also complies with Title VII of the US Civil Rights Act, which prohibits sexual harassment or discrimination based on gender, marital status, parenthood, or sexual orientation. In the interviews, no complaints were received in this regard.
Risks to local stakeholder resources due to project implementation and how the project will mitigate such risks, including plans to ensure the project will not impact local stakeholders' property rights without the free, prior and informed consent.	In the opinion of AENOR, confirmed during the interviews (Interviews #1 and 5#), since the project is only implemented on private properties associated with FCW, the rights of third parties over their properties (neither in possession nor in rights of use) are not affected, and in this context an FPIC does not apply.
Processes to ensure ongoing communication and consultation, including a grievance redress procedure to resolve any conflicts that may arise between the project proponent and local stakeholders.	The PP has established mechanisms for ongoing communication with stakeholders to allow them to raise concerns about potential negative impacts during project implementation: 1) FCW website (https://forestcarbonworks.org/) allows for comments to be submitted at any time, 2) and the Project website also includes a formal

	grievance process, as confirmed by AENOR (https://forestcarbonworks.org/grievance-procedure). The VVB confirmed that the grievance redress procedure complies with 3.18.19 of the VCS Standard v4.4 by considering the steps requested, as well as it considers communications in a culturally appropriate manner, confirmation of the reception of the grievances and PP assessment of its eligibility. Until now, no grievances have been received according to the interviews. The PAI owners will have all the contact information in the manuals (Annex R. FCW Membership Offer, and Annex AR. FCW Membership Guide) and it was confirmed with the owners of the only validated PAI (#1024) (Interview #5). In the case of the neighbors, it was also observed during the onsite visit that the boundaries were marked and there signs indicating the PP contact details in case of comments or grievances (Activity #1). AENOR confirmed that at the moment no complaints have been received by reviewing the records. Future stakeholder meetings are planned to occur periodically, according to Annex R (FCW Stakeholder Engagement Plan v1.0) with different key locations in mind as well as virtual and in-person formats in order to maximize participation, as confirmed with the PP (Interview #1).
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The audit team concludes, overall, that the project has been designed and, as appropriate, is implementing, plans and processes to ensure the project will not create any negative impacts on local stakeholders or mitigates such impacts where necessary. This conclusion is justified as follows:

- The audit team confirmed during interviews with PP members that any potential negative impacts have been assessed, resulting in no social or environmental risks, and the stakeholders did not communicate anyone.
- The audit team concludes for any potential risks identified, that the PP will put in place appropriate prevention and/or mitigation measures if they ever happen. However the negative impacts are only potential, in the future, only under a bigger scale perspective.
- The audit team confirmed that the grievance and redress procedure is in conformance with the VCS requirements of section 3.18.19, and the local stakeholders are aware of it.

3.3 Application of Methodology

3.3.1 Title and Reference

The title and reference of the methodology applied by the project (referred to hereafter as “the methodology”) and any tools applied by the project are identified in the table below. AENOR audit team affirms that the methodology and any applied tools, and the specific versions of them applied by the project, were valid at the time of issuance of this validation report.

Methodology/Tool	Reference	Version	Validity at the time of validation
Methodology for Improved Forest Management Through Extension of Rotation Age	VM0003	1.3	Yes, confirmed by VVB.
UNFCCC CDM Tool for the demonstration and assessment of additionality	EB 70	7.0.0	Yes, confirmed by VVB.
AFOLU Non-Permanence Risk Tool 4.0 in VCS	-	4.0	Yes, confirmed by VVB.
Tool for calculation of the number of sample plots for measurements within A/R CDM project activities.	EB 58	02.1.0	Yes, confirmed by VVB.
Tool for testing significance of GHG emissions in A/R CDM project activities.	EB 31	1	Yes, confirmed by VVB.

3.3.2 Applicability

The PD states all evidence used to demonstrate each condition of the applicable methodology; where complete explanations are included. The assessment was carried out for each VM0003 applicability criterion and included, amongst others, the review of evidence and sources provided in the PD and the compliance check of the local project setting (project description and the validation of the current PAI - #1024) with the applicability conditions as follows:

Applicability Condition	Steps taken by the audit team to assess compliance of Project and PAI #1024	Conclusion regarding applicability condition

1) Forest management in both baseline and project scenarios involves harvesting techniques such as clear cuts, patch cuts, seed trees, continuous thinning, or group selection practices.	VVB confirmed in Annex AR and interviews #1,5,6 that the baseline scenario is even-aged management which requires harvesting techniques such as clear cuts, patch cuts and seed tree, as well as that the project scenario includes techniques such as patch cuts, continuous thinning or group selection practices according to a policy maintained by the PP for an uneven-aged management. Note that Applicability Condition 1 is satisfied at the project-level, as both project and baseline scenarios include harvesting techniques such as clear cuts, patch cuts, seeds trees, continuous thinning and group selection practices. Measurement strata with “no harvesting” in both the baseline and project scenarios are included in the project area to satisfy requirements surrounding activity-shifting leakage (Applicability Condition 8 and Eligibility Criterion 2d). The management strata with “no harvesting” in the baseline and project scenario are conservative to include in the project area as they do not contribute to crediting from harvesting. This is demonstrated by the project and baseline FVS models (Annex AG), as carbon stocks	The project and current PAI validated meets this applicability condition.
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	are identical between the project and baseline scenario.	
2) Forests which are not subject to timber harvesting, or managed without an objective for earning revenue through timber harvesting in the baseline scenario are not eligible under this methodology.	The baseline scenario is timber harvesting as common practice to the region, as confirmed by VVB in Annex H (see section 3.3.5 Additionality in this report), while the baseline not to be unmanaged (but subject to timber harvesting to be comparable to the baseline scenario) is a eligibility criterion (#6).	The project and current PAI validated meets this applicability condition.
3) Prior to the first verification event, the project area must meet one of the following conditions: a) Certified by Forest Stewardship Council (FSC); or b) Subject to an easement, or equivalent instrument, recorded against the deed of property that prohibits commercial harvesting for the duration of the crediting period unless later certified by FSC.	The PAI joining (and the future ones) is subject to an easement (Forest Management Lease Agreement) recorded against the deed of property that prohibits commercial harvesting for the duration of the crediting period, as verified by VVB in Annex D and interviews #1, #5. In case of PAI #1024 an FSC Forest Management Plan is not required yet as there is no planned commercial harvesting in the immediate future. Annex D serves as the easement that prohibits commercial harvesting for the duration of the crediting period, unless the PAI is later certified to FSC.	The project and current PAI validated meets this applicability condition.
4) Project proponents must define the minimum project length in the project description.	VVB verified in Annex D (Exhibit E.11 and C) and Interviews #1, #5 that the minimum project length for crediting is 25 years,	The project and current PAI validated meets this applicability condition.

	while is it required PAIs to maintain carbon stocks until expiration of project lifetime, at minimum 60 years.	
5) The project does not encompass managed peat forests, and the proportion of wetlands is not expected to change as part of the project.	Annexes BB, AG, AO, as well as the onsite visit, showed that the PAI does not include soil strata that meet the minimum organic matter composition (75%) to comprise peat soils.	The project and current PAI validated meets this applicability condition.
6) Project proponents must have a projection of management practices in both with- and without-project scenarios.	A projection of baseline scenario and project scenario including management practices is modeled in Annexes AI/AJ, AM/AN, AK/AL as confirmed by VVB.	The project and current PAI validated meets this applicability condition.
7) Where fire is used as part of forest management, fire control measures such as installation of firebreaks or back-burning must be taken to ensure fire does not spread outside the project area – that is, no biomass burning is permitted to occur beyond the project area due to forest management activities.	VVB confirmed that no fire management that causes any emissions can be used as part of the forest management (Annex D, section 9.2) and according to Annex I, if fire is used then fire control measures, such as installation of fire-breaks or back-burning, must be taken. Onsite visit by VVB to the current PAI showed that fire is known by the owner not as part of the forest management during the project.	The project and current PAI validated meets this applicability condition.
8) There must be no leakage through activity shifting to other lands owned or managed by project proponents outside the boundary of the project area.	VVB confirmed that the project does not generated activity-shifting leakage, since all forested lands of every PAI and of each landowner are enrolled in the project, as requested in Annex D (section 9.14 and Exhibit A), and confirmed with	The project and current PAI validated meets this applicability condition.

	PAI #1024 owners (Interview #5, Annex AZ).	
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The VVB confirmed that the ‘CDM Tool for the demonstration and assessment of additionality’ and the ‘AFOLU Non-Permanence Risk’ tool have no applicability conditions relevant to this project. The ‘Tool for calculation of the number of sample plots for measurements within A/R CDM project activities’ has “no internal applicability conditions”. The applicability of the ‘Tool for testing significance of GHG emissions in A/R CDM project activities’ states that it shall be used in the application of a CDM approved A/R methodology, thus this condition is met.

In opinion of AENOR, the evidence and explanations confirm the fulfillment of the project with the methodology and associated tools.

3.3.3 Project Boundary

Spatial Boundaries

The audit team evaluated the spatial boundaries of the project area based on the procedures outlined in the methodology and in conformance with Section 3.11.2 of the VCS Standard v4.4. The audit team confirmed that the PAI #1024 and spatial boundaries of the project area are included in the area of contiguous United States and southern Alaska, and are accurately depicted in the shape files provided by the project proponent (Annex AS, N) as demonstrated in the maps in section 3.3 of the PD. The audit team confirmed through independent recalculation that the area in the shape file provided match the areas of the forest analysis units presented in the PD and those utilized in the calculation workbooks (Annexes AK, AL, AM, AN).

Onsite, PAI #1024 was visited, where the limits of the properties and land uses and identified strata were reviewed in accordance with the defined carbon accounting area, being in accordance with what was reported in the PD. It was also observed that the boundaries were marked and there were signs indicating the PP contact details in case of comments or grievances.

Carbon pools

The steps taken to assess whether each carbon pool has been selected (or not selected) correctly in accordance with the methodology are described below:

Carbon Pool	Included/Excluded	Steps taken by the audit team to assess the element
Above ground biomass, credited	Yes	Checked against Table 1 in methodology to confirm that inclusion ‘Above ground tree biomass – credited’ is mandatory. All calculations of GHG emissions reductions and emissions include this pool.
Above ground	No, however	PP justified it as a portion of the major carbon pool which will

biomass, uncredited reserve stock (URS)	subject to verification	be subject to the project activity but is conservatively not contributing towards VCU accounting and issuance (see 3.3.7 Methodology deviations). Calculations of GHG emissions reductions and emissions include this pool.
Below ground biomass	Yes	Checked against Table 1 in methodology to confirm that inclusion 'Below ground biomass' is mandatory. All calculations of GHG emissions reductions and emissions include this pool.
Dead wood, Standing, credited	Yes	Checked against Table 1 in methodology, PP elects to include dead wood as long as it represents less than 50% of the total carbon volume on site in any given year. Calculations of GHG emissions reductions and emissions include this pool.
Dead wood, Standing, uncredited reserve stock (URS)	No, however subject to verification	PP justified it as a portion of the standing dead wood pool that will be subject to the project activity but will conservatively not contribute towards VCU accounting and issuance (see 3.3.7 Methodology deviations). Calculations of GHG emissions reductions and emissions include this pool.
Dead wood, Lying	Yes	Checked against Table 1 in methodology, PP elects to include dead wood as long as it represents less than 50% of the total carbon volume on site in any given year. Calculations of GHG emissions reductions and emissions include this pool.
Litter	No	Changes in the litter pool will be de minimis as a result of rotation extension, thus the Table 1 of the methodology requests its exclusion. Calculations of GHG emissions reductions and emissions exclude this pool.
Soil organic carbon	No	Changes in the soil organic carbon pool will be de minimis as a result of rotation extension, thus the Table 1 of the methodology requests its exclusion. Calculations of GHG emissions reductions and emissions exclude this pool.
Wood products	Yes	According to Table 1 of the methodology, this stock may increase or decrease relative to the baseline due to implementation of the project activity, then it is included since evidence cannot "be provided that carbon stocks in wood products are rising faster in the project case than in the baseline or are decreasing faster in the baseline than in the project case". Calculations of GHG emissions reductions and emissions exclude this pool.

GHG Sources and Sinks

The audit team confirmed through the review of the methodology (Table 2) that:

- CO₂ emissions due to burning of biomass are excluded per Section 5.1 of the Methodology VM0003 v1.3 in the baseline and project scenarios, so not accounting for them is appropriate.
- CH₄ emissions due to burning of biomass are included per Section 5.1 of the Methodology VM0003 v1.3 in the baseline and project scenarios, so accounting for them is appropriate.
- N₂O emissions due to burning of biomass are excluded per Section 5.1 of the Methodology VM0003 v1.3 in the baseline and project scenarios, so not accounting for them is appropriate.

Above selections are considered in the calculations of GHG emissions reductions and emissions in the spreadsheets ((Annex AI, AJ, AK, AL, AM, AN).

The audit team concludes, overall, that the project physical boundaries are appropriately specified, and the selected sources, sinks and reservoirs appropriately are justified for the Project design and the PAI validated.

3.3.4 Baseline Scenario

The identified baseline scenario in PAI #1024 is justified according to VM0003 Methodology for Improved Forest Management Through Extension of Rotation Age 1.3 section 6.3. The audit team's assessment of the baseline scenario for initial PAI #1024 is included in the table below.

Items to be assessed	Steps taken by the audit team to assess the item
Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable.	The audit team conducted interviews with independent forester (Interview #6), and staff (Interviews #1-4) and owners (Interview #5); reviewed relevant documentation (Annex H, AU, AA, AB, AV, E, F), and inspected onsite the project area and surroundings (see section 2.4 in this report). The land use history has been established as even-aged timber harvesting in order to maximize net present value to the landowner through timber harvests, and including clear cut, patch cut, seed tree, continuous thinning or group selection forest management techniques.
Documentary evidence used in determining the baseline scenario is relevant, and correctly quoted and interpreted in the project description.	The baseline scenario uses common silvicultural practices and rotation ages for the location in which PAI #1024 resides. Rotation ages used within the baseline scenario were determined through consultation with local, practicing forester, documented in the forester attestation. A listing of

	the baseline rotation ages applied for each management stratum (modeling unit) was provided. Baseline rotation ages of each management strata were confirmed by referencing FVS files provided with the baseline model and forester attestation. Evidence corroborating that the trees included in the project activity were at risk of harvesting in the baseline scenario is provided via the forester attestation in Annex AU. In conclusion, it was confirmed that the documentary evidence is relevant and interpreted correctly in the PD (Annex H, AU, AA, AB, AV). All PD reporting requirements pertaining baseline scenario have been included.
Relevant national and/or sectoral policies and circumstances have been considered and are listed in the project description.	Confirmed during interviews with independent forester (Interview #6), owners (Interview #5) and staff (Interviews #1-5) and an independent review of relevant forestry laws in Washington State, that the baseline scenario of continuation of the pre project activities (even-aged timber harvesting for maximizing net present value) are in-line with relevant national and sectorial policies.
The procedures for identifying the baseline scenario have been correctly followed and the identified scenario reasonably represents what would have occurred in the absence of the project.	As discussed in the table below and section 3.3.5 on additionality, all procedures for identifying the baseline scenario have been correctly followed, according to section 6.3 of the methodology and the additionality tool. The audit team agrees that the procedures were appropriate, and the baseline scenario reasonably represents what would have likely occurred in absence of the project.

The specific steps taken to validate the initial PAI #1024 baseline scenario against each applicable requirement of the methodology are described below.

Section	Steps taken to assess compliance by VVB
Step 1a. Identify credible alternative forest management scenarios to the proposed VCS project activity	The audit team confirmed that the project identified the baseline and demonstrated that the project activity in PAI #1024 is additional by applying the “EB 70 UNFCCC CDM Tool for the demonstration and assessment of additionality v7.0.0”. See Section 3.3.5 below. Audit team conducted interviews on site with independent forester (Interview #6), owners (Interview #5) and staff

	(Interviews #1-4), reviewed relevant documentation (Annex H, AU, AA, AB, AV, E, F), and inspected onsite the project area and surroundings, to determine land use history and likely scenarios without project activity. Audit team confirmed that the legal and common practice of the project area was for even-aged timber harvesting for maximizing net present value.
Step 1b. Selection of a single baseline forest management scenario	The audit team assessed the four plausible scenarios identified by the PP, and has found that the selection of the legal and common baseline scenario (which in this case are identical) is appropriate to this project. The PP demonstrated that even-aged timber harvesting for maximizing net present value is the most plausible scenario, since it complies with legal requests and is the common practice in the region, through: - Interviews with independent forester (Interview #6). - Interview with owners (Interview #5). - Interview with staff (Interviews #1-4). - Review of comparable forest management plans (Annex H). - Review of project forester attestation by an independent forester (Annex AU), whose resume covers: Bachelor of Science –Biology- (U. of Vermont, Burlington), MSc in Natural Resources - Forestry Concentration (University of Minnesota), and ten years of experience as a forester in Washington State, covering silviculture and timber sales skills. - Review relevant forestry laws in Washington State. - Documentary review of Washington State best management practices (Annex E, F): Washington State Forest Practices Act (chapter 76.09 RCW), Washington State Forest Practices Rules (Title 222 WAC), - And inspected onsite the project area and surroundings. Thus, in VVB's opinion, evidence is enough according to methodology requests.

3.3.5 Additionality

Overall, the VVB concludes that additionality is justified for the project according to EB70 UNFCCC CDM Tool for the demonstration and assessment of additionality v7.0.0, as VM0003 Methodology for Improved Forest Management Through Extension of Rotation Age 1.3 requests. A summary of steps taken to assess additionality in initial PAI #1024 is provided below.

Section	Steps taken to assess compliance
Adherence to regulatory surplus requirements.	The alternatives to the project are legal. The audit team confirmed that the project activity in initial PAI #1024 goes above and beyond the alternative scenarios with respect to sequestering CO₂. The audit confirmed through interviews with independent forester (Interview #6), owners (Interview #5) and staff (Interviews #1-4), the PD review, and on-site visit that all plausible baseline scenarios could be undertaken within the legal requirements of Washington State (AA, AB, AV, E, F).
The appropriateness of data and parameters used in financial calculations and sensitivity analyses, including those taken from feasibility study reports.	The investment analysis in PAI #1024 covers the length of the project longevity period (100 years), according to CDM AM-Tool 01 v7.0 Annex 5, paragraph 3 request (the length of the investment analysis to “reflect the period of expected operation of the underlying project activity -technical lifetime-”); and based on regional data by the Forest Biometrics Research Institute for the most recent year available, as validated in Annex AH and BF by AENOR. It was checked that the analysis excluded the financial returns from carbon finance and the financial costs of carbon project development. The results of the sensitivity analysis show that the proposed project activity is less financially attractive than the baseline scenario of common practice management (Annex AH), where the difference in NPV between the two scenarios is driven by the reduced harvest volumes in the project scenario. That said, the audit team confirmed the data and analysis presented in the NPV project cash flow analysis for initial PAI #1024 regarding the prevalence of forestry operations being much more profitable, as well as the project activity being financially unviable without the incentive of the carbon finance, according to CDM AM-Tool 01 v7.0 Annex 5, Para 3.
The suitability of the benchmark used for investment analysis.	A financial benchmark analysis is not applicable for this project because the project proponent applied an investment comparison approach.

The credibility of each barrier identified in the barrier analysis.	Barrier analysis is not applied.
The appropriateness of the geographical region used in the common practice analysis.	Through interviews with independent forester (Interview #6), owners (Interview #5), and on-site visit (see section 2.4 in this report), the audit team confirms the appropriateness of the geographic region (Washington State).
Information regarding similar projects identified in the common practice analysis, including essential distinctions between similar projects and the proposed project.	There are no other project activities in the region similar to the project scenario, according to independent forester (Interview #6), owners (Interview #5), and documentation on best practices in the States (Annex E, F) and revision of public information of GHG registries.
The reasonableness of assumptions made in the demonstration of additionality.	Interviews with project personnel, stakeholders, and the on-site visit confirmed the assumptions underlying the demonstration of additionality.

3.3.6 Quantification of GHG Emission Reductions and Removals

Quantification of baseline emissions

Procedures for the quantification of baseline emissions and/or removals were taken from Sections 8.2, 8.4, and 8.5 of the VM0003 Methodology v1.3. The following steps were taken:

Quantification of GHG emission reductions and removals, including Parameters at validation		Steps taken to validate the quantification methods
ΔC_{BSL}	Baseline net greenhouse gas removals by sinks (t CO ₂ e)	Properly calculated by using Equation 1, as confirmed in Annex Q.
ΔC_{BSLp}	Carbon stock changes in all pools in the baseline scenario (t CO ₂ e)	Properly calculated by using Equation 2, as confirmed in Annex Q.
$\Delta C_{BSLtree}$	Carbon stock changes in above-ground and below-ground biomass of trees in the	Properly calculated by using Equation 3, as confirmed in Annex Q. It was confirmed by the VVB that the project isn't accounting for ERRs from trees

	baseline scenario (t CO ₂ e)	younger than the rotation age because, per VM0003 Equation 3, ERRs are only generated where baseline emissions exceed project emissions. The baseline scenario includes removals from the growth in young stands until the time they are harvested in the baseline scenario.
$\Delta C_{BSLAG BG,i,100}$	Summed annual net carbon stock change in above-ground and below-ground biomass for stratum i summed over the 100-year modeled baseline (t C)	Quantification of ex-ante onsite carbon stocking was carried out by following the allometric method approach defined in VM0003. The volume and biomass equations and references were sourced from the US Forest Inventory & Analysis (FIA) program, which are also used in both the California Air Resources Board and Climate Action Reserve programs, and are available on both of these programs' websites. Biomass equations were compiled in proprietary visual basic analysis code (VBA) in Microsoft Excel and data analysis software. Tree species, DBH, height, decay, and region-specific biomass equations were used to calculate carbon estimates in tonnes of CO₂ equivalent. Carbon was only calculated for trees above 5 inches at DBH and above. Both the project and baseline ex-ante scenarios utilize the same underlying forest inventory data to forecast, which was realized in 2022 (37 plots randomly located) for the current PAI #1024. All inventory data underwent QA/QC checks as described (Annex AD). The plot allocation process used the "Calculation of the number of sample plots for measurements within A/R CDM project activities" tool v2.1.0, as confirmed by VVB in Annex BD, using a grid (125m on the X axis and 75m Y axis) and random allocation (Annex BD). During the onsite visit a sample of plots were re measured (Activity #2), with no major deviations regarding Annex AI and AM (prior to URS consideration). The project defined first 2 larger measurement strata designed to increase measuring precision (per VM0003 section 9.3 Sampling Design and Stratification). Using aerial imagery (National

		Agriculture Imagery Program –NAIP- and other aerial imagery datasets to determine differences in forest structure and species composition) and field visits, PAI #1024 was stratified into relatively homogeneous units for sampling purposes. Due to the homogeneous nature of the forest types PAI #1024 was stratified (for inventory purposes) into two strata (Mixed forest –ID 102402- and Riparian forest –ID 102401); which was crosschecked during the onsite visit (see Activity #2 in section 2.4 of this report). These larger measurement strata, after the field inventory and its processing, were further subdivided into 5 management strata designed to better reflect a combination of management system, site index, species, and age class (per VM0003 section 8.1 Stratification, which requests “further division where differences exist in site index, species and/or age class”) to ensure that all areas subject to management within a given year or within years between monitoring events comprise whole, discrete management strata. The baseline and project model were organized by the 5 management strata, with results rolled up to the 2 measurement strata for ERR accounting. The VM0003 equations for change in carbon pools (e.g. equations 3, 4, 5) are calculated at the management stratum level, then rolled up to the project level (measurement level). In other words, the reason of the two levels of stratification is the relationship between the model for baseline and project (5 management strata) and the ERR report (2 measurement strata), so the two stratifications are not different, but nested depending on the appropriate variables/purpose of stratification. That said, the final stratification was as follows:														
		<table><tr><th rowspan="2">PAI</th><th colspan="2">Measurement Stratum</th><th>Management Stratum</th></tr><tr><th>ID</th><th>Stratum type</th><th>ID</th></tr><tr><td rowspan="2"></td><td>102402</td><td>Mixed forest</td><td>102402_004 102402_005</td></tr><tr><td>102401</td><td>Riparian forest</td><td>102401_001 102401_002</td></tr></table>	PAI	Measurement Stratum		Management Stratum	ID	Stratum type	ID		102402	Mixed forest	102402_004 102402_005	102401	Riparian forest	102401_001 102401_002
PAI	Measurement Stratum			Management Stratum												
	ID	Stratum type	ID													
	102402	Mixed forest	102402_004 102402_005													
	102401	Riparian forest	102401_001 102401_002													

				102401_003
		Then, AENOR determined that the management system (baseline and project management system and rotation age), site index, species (leading specie and species composition), and dominate age class were properly considered by the PP for stratification, excluding harvest constraints area, according to: - Onsite by visiting, in the only validated PAI (#1024) 5 out 37 monitoring plots, including both identified measurement strata types (indicated in Activity #2 in section 2.4), as well as the revision of the GIS database. - Revision of the calculations (Activity #7 in section 2.4), including the processing of the inventory (Treelist), where AENOR confirmed the parameters considered for the management stratification, following VM0003 requirements. It was supported in documentary evidence (Annex BC, 1, AS). Last, Annex E contains harvest constraints used in this management stratification. Note that in the PD/MR and also the VVR all references to variable i in the VM0003 equations refer to measurement strata, and all references to “stratum” in all Annex documents refer to measurement strata. That said, AENOR found that the stratification approach taken by the PP is consistent and complies with the methodology, and that the model (baseline and project) was run for the 21 management strata (as modeling unit) and accumulated for the 9 management strata for the ERR calculation showed in the workbooks provided (Model Results, Harvest Wood Products and Accounting Model). Note that per VM0003 Section 9.3, ex-post re-stratification would be allowed under certain circumstances, including unexpected disturbances or forest management activities, what will be internally monitored by the PP and crosschecked by the VVB during the onsite verification audits if there is		

		evidence of silvicultural treatments, signs of fires, diseases, etc. If no sign or declaration by the PP, no re-stratification of the project would be required and ex-post stratification would be the same as the ex-ante one. Forest management of the baseline and project scenarios were modeled over a 100-year period using the US Forest Service Forest Vegetation Simulator (FVS) software, which is a forest growth and yield model that allows for region-specific parameterization across the United States. To confirm its accuracy, VVB reproduced the inputs used by the PP again, in order to compare the outputs, using the following steps: 1. As data input, data from the inventory carried out by the PP described in section 4.4 of the PD were used (37 in total, in Annex AJ). See Activity #2 and Activity #3, where a sample of plots were cross-checked to compare the results between the inventory measurement and the measurement during the audit. The inventory data (starting point with the forest conditions at the beginning of the project start date) contains as parameters the species, DHB, H, all parameters related to dead Wood, plot area, site conditions, etc., in short, the necessary parameters described in sections 5.1 and 5.2 of the PD. 2. As assumptions, the 100-year simulation scenarios contemplate a baseline scenario with even-aged silvicultural system and one with an un-aged system as objective management: while the first mainly contemplates clear cuts, seed-tree harvest and shelterwood harvest as harvesting techniques, the project scenario contemplates continuous thinning, group selection and patch cuts to maximize the carbon content and a harvest always less than 10% of the carbon stock during any 5-year period. Best management practices in the State of
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		Washington were also considered (Annex E, F: Washington State Forest Practices Act chapter 76.09 RCW; Washington State Forest Practices Rules Title 222 WAC), aligned also in the practices reported onsite by the PP technical team, owner and independent forester (Interviews #1-6). 3. The models collected in Westside Cascades (WS) Variant Overview (Annex 2) –which is the corresponding one to the current PAI- were used to simulate the growth and development of individual trees and stands over time, based on tree growth rates, mortality, competition, and response to environmental conditions for the region of the PAIs. 4. The projection of the future forest conditions was obtained by applying the growth and yield models (WS Variant Overview) and factoring in the effects of management actions (baseline scenario and project scenario) to predict changes in estimates of biomass considering the validated pools. After conducting a comprehensive review of the FVS simulation, the VVB assessed the accuracy and reliability of the modeling process, also supported by the PP technical team (Activity #7). The outputs in Annex AG indicate that the results obtained were based on adequate parameters from inventory and reasonable assumptions, and aligned closely with the outcomes produced by the PP's original FVS simulation. VVB examined the input data, model parameters, and simulation execution and found a high degree of consistency between both results.
ΔC_{BSLDW}	Carbon stock changes in dead wood in the baseline scenario (t CO ₂ e)	Properly calculated by using Equation 4, as confirmed in Annex Q.
$\Delta C_{BSLDW,i,100}$	Summed annual net carbon stock change in dead wood for stratum i summed over the 100-year modeled baseline (t C)	Under the VM0003 Methodology, the dead wood pool is broken into two components: standing dead wood and lying dead wood. Below-ground dead wood is conservatively omitted.

$\Delta C_{DW,i,t}$	Annual carbon stock change in dead wood for stratum i averaged over the monitoring period (t C yr ⁻¹)	Properly calculated by using Equation 24, as confirmed in Annex Q.
C_{DW,i,t^*}	Carbon stock of dead wood in stratum i at time t = 1,2 (t C)	The annual change in the dead wood carbon pool for stratum i was calculated as the sum of the lying and standing deadwood components, multiplied by CF_{DW} (IPCC default value = 0.5 (t C t ⁻¹ ; correctly inputted in spreadsheet), according to Equation 25, as validated by the VVB in Annex AJ.
$B_{SDW,i,t}$	Biomass of standing dead wood in stratum i at time t (t d.m.)	As required by the VM0003 Methodology, a 10-year linear decay function was applied to standing dead within the FVS baseline model (Annex AG). After 10 years standing dead is assumed to fall and transition into the lying dead wood pool. It was sampled using a plot method.
$B_{LDW,i,t}$	Biomass of lying dead wood in stratum i at time t (t dam.)	The super section from the California Air Resource Board Protocol for US Forest (June 2015) of PAI #1024 was established and the forest type was determined (validated in Annex AF). Forest types were matched with FIA (Forest Inventory and Analysis Program) forest types listed in The Fire and Fuels Extension to the Forest Vegetation Simulator: Updated Model Documentation, Table 4.16.10, pp.295-296 (2015), from USGS, Forest Management Service Center (crosschecked in Annex AE). The lying dead wood default biomass values for size classes 3-6, 6-12, and >12 were summed for each forest type associated with PAI, and then used as lying dead values for the initial year of the baseline model. Following the initial year, lying dead wood was assumed to be equal to the difference between current above ground carbon contained within standing dead and the standing wood values reported in the previous 10-year cycle. Since lying dead was calculated directly from changes in the standing dead wood pool, the same 10-year linear decay function was applied.

		Default lying dead wood biomass values that were used for PAI #1024 were correctly used for calculations in Annex BE.
ΔC_{BSLWP}	Carbon stock changes in wood products in the baseline scenario (t CO ₂ e)	Properly calculated by using Equation 5, as confirmed in Annex AO.
$\Delta C_{BSLWP,i,t}$	Baseline annual net carbon stock change in wood products for stratum i at time t (t C yr ⁻¹)	Properly calculated by using Equation 28, as confirmed in Annex AO.
$\Delta C_{WP,t}$	Carbon stock of wood products at time t (t C)	To calculate wood products the Winjum et al. Method was used (Annex J).
$EXC_{WP,ty}$	Summed stock of extracted biomass carbon from within the project area for class of wood product ty (t C) defined here as sawnwood, wood-based panels, other industrial roundwood, and paper and paper board	Based on $V_{ex,h,ty,j}$ (Volume of timber extracted from within the project area during harvest h for species j and wood product class ty (m ³), using equation 31, as confirmed by VVB in Annex AO.
$C_{Mill,ty}$	Summed stock of carbon remaining in wood products of class ty from within the project area after milling (t C)	To calculate the total carbon in harvested timber that enters the wood products pool based on mill efficiencies and product disposition percentages, based on $EXC_{WP,ty}$ (Summed stock of extracted biomass carbon from within the project area for class of wood product ty (t C)). WW is Wood waste fraction based on mill efficiency. Assumed to be 0.19 as the PAIs will exist within a developed country according to the Winjum et al. method. Properly calculated by using Equation 32, as confirmed in Annex AO. WW was correctly inputted.
$C_{WP,ty}$	Total carbon removed from the project area stored in each type, ty, of harvested wood products (t C)	Based on $C_{Mill,ty}$ calculated and considering equation 33: - SLF (Fraction of wood products that will be emitted

		to the atmosphere within 3 years of timber harvest in tC). - OF (Carbon emitted due to decay or burning of medium-lived wood products calculated for 20 years following each harvest and summed by product type and year t). Per the VM0003 Methodology, a default value of 0.62 was used for OF for both sawnwood and paper product classes. Properly calculated by using Equation 33, as confirmed in Annex A0. SLF and OF were correctly identified by PP (Winjum et al. 1998) and inputted in calculation spreadsheet.
SLF	Fraction of wood products emitted to the atmosphere within 3 years of timber harvest (t C)	Correctly calculated according to equation 34, as confirmed in Annex A0. Default slp values of 0.12 and 0.24 were used for sawnwood and paper product classes, respectively, according to VM0003 Methodology v1.3. Correctly inputted in the spreadsheet.
MLF	Fraction of wood products that is considered stored for the medium term and will be emitted to the atmosphere each year after harvest for 20 years (t C)	It was properly calculated in Annex A0 according to Equation 35 and: - Using equation 36 to calculate the fraction of wood products stored between years 3 and 5 ($MLF_{3,5}$), with a Short-lived proportion for the period (slp_{adj}) of 0.08 (sawnwood) and 0.16 (paper product classes), according to VM0003 v1.3. - Also using equation 37 to calculate the fraction of wood products stored between years 5 and 100 ($MLF_{5,100}$). Both properly inputted in the spreadsheet, as the VBB could confirm in Annex A0.
GHG _{BSLE}	Greenhouse gas emissions as a result of forest management activities within the project area in the baseline scenario (tCO ₂ e)	According to equation 6, Baseline GHG emissions are equivalent to logging slash ($E_{BSL, BiomassBurn,t}$), which in the baseline scenario is excluded according to the methodology, as such, GHG_{BSL,E} was considered as zero. AENOR confirmed that it is a correct interpretation.

URS	Uncredited Reserve Stock	When a PAI is first enrolled to the grouped project, $\Delta C_{BSL,tree}$ and $\Delta C_{BSL,DW,standing}$ were conservatively reduced from the initial carbon stocks (based on inventory data, projected via FVS, Annex AG) to reflect the nine-percent (9%) portion of initial carbon stocks to be set aside to the URS. This procedure results in baseline depletion rates that were conservatively lower in baseline emissions, resulting in fewer credits as compared to otherwise (see section 3.3.7 in this report). Its proper calculation was confirmed in Annex AM and AN.
Ratio of molecular weight of CO ₂ to carbon (t CO ₂ e t C-1)	$\frac{44}{12}$	Default value
D _j	Basic wood density of species j (t d.m. m-3)	Bibliography value (Winjum et al. 1998). Correctly identified by the PP and inputted in calculation spreadsheet (Annex AX).
D _{DW}	Basic wood density of dead wood in the density class-sound (1), intermediate (2), and rotten (3) (T d.m. ft ⁻³)	Bibliography value (Harmon et al. 2011). Correctly identified by the PP and inputted in calculation spreadsheet (Annex M).
CF _j	Carbon fraction of biomass for tree species j; IPCC default value = 0.5 (t C t-1 d.m.)	Default value. Correctly identified by the PP and inputted in calculation spreadsheet.
A _{BSL, i}	Area of baseline stratum, i (Acres)	Calculated by GIS. Crosschecked by AENOR through the shapes ((Annexes AS, N) and onsite (Activity #1). The project area and its strata do not change for ex ante and ex estimations, regardless the scenario.
BEF	Biomass expansion factor for conversion of annual net increment in stem biomass to total above ground tree biomass increment for species j (Dimensionless)	Default values according to VM0003 v1.3. Correctly identified by the PP and inputted in calculation spreadsheet.

Quantification of project emissions

Procedures for the quantification of project emissions and/or removals were taken from Section 8.5 of the VM0003 Methodology v1.3. The following steps were taken:

Quantification of GHG emission reductions and removals, including Parameters at validation		Steps taken to validate the quantification methods
ΔC_{ACTUAL}	Actual net greenhouse gas removals by sinks (t CO ₂ e)	Properly calculated by using Equation 10, as confirmed in Annex AK and AL.
ΔC_P	Sum of the changes in above-ground biomass, dead wood and wood products in the project scenario (t CO ₂ e)	Annual change in carbon stock in all selected carbon pools for year t (t C yr ⁻¹) multiplied by the ratio of molecular weights of CO ₂ and carbon (mol mol ⁻¹) (44/12), according to equation 11. Properly calculated by using Equation 10, as confirmed in Annex AK and AY.
ΔC_t	Annual change in carbon stock in all selected carbon pools for year t (t C yr ⁻¹)	It was properly calculated using Equation 12, as the sum of Annual carbon stock change in above-ground and below-ground biomass, dead wood carbon and wood products carbon for stratum I (t C yr ⁻¹). Confirmed in Annex AK and AL.
$\Delta C_{AG,I,t}$	Annual carbon stock change in above-ground biomass of trees for stratum i (t C yr ⁻¹)	The allometric equation method was chosen (Equation 19). Tree species, DBH, height, decay, and region-specific biomass equations were used to calculate carbon estimates in tonnes of CO₂ equivalent. It was estimated based on field measurements in sample plots, considering the Carbon stock in above-ground biomass of tree and Carbon fraction of biomass for tree species (IPCC default value = 0.5 tC/td.m.). Carbon was only calculated for trees above 5 inches at DBH and above. Both the project and baseline ex-ante scenarios utilize the same underlying forest inventory data to forecast, which was realized in 2022 (37 plots) for the current PAI (Annex AI and AJ). All inventory data underwent QA/QC checks as described (Annex AD). The plot allocation process used the “Calculation of the number of sample plots for measurements within A/R CDM project activities” tool v2.1.0. During the onsite visit a sample of plots were re

		measured (Activity #2), with no major deviations. In order to be consistent, baseline scenario and project scenario have the same stratification. As well as in the baseline, the volume and biomass equations and references were sourced from the US Forest Inventory & Analysis (FIA) program, which are also used in both the CAR Board and CAR programs, and are available on both of these programs' as checked and considered appropriate by AENOR. Biomass equations were compiled in proprietary visual basic analysis code (VBA) in Microsoft Excel and data analysis software (checked in Annex AK and AL). Within the ex-ante model the two main parameters used were: - Annual Delta C_{actual}: estimate the project proponent developed for yearly carbon accretion rates in a per acre basis in the southeastern United States, where the current PAI is located, based on inventories conducted in the region. - Baseline Depletion Rate: developed by the PP to approximate the yearly decrease in baseline stocks from the project starting year. The parameters were only used in the ex-ante accounting model and not within ex-post calculations, since are approximate estimates for ex ante estimation. To calculate total carbon stocks in trees (Equation 21) was used, by taking Carbon stock in above-ground biomass and Carbon stock in below-ground biomass. This was multiplied by the relation of Area of stratum/Total area of all sample plots in stratum (Equation 22), to obtain Carbon stock in trees per stratum. Divided by the Number of years between monitoring time t1 and t2 (Equation 23), it is obtained Annual carbon stock change in above a below-ground biomass of trees for stratum. Proper calculation confirmed in Annex AL and AK.
$\Delta C_{BG,i,t}$	Annual carbon stock change in below-ground	Calculated as Carbon stock in above-ground biomass of tree multiplied by Root-shoot ratio appropriate for biomass

	biomass of trees for stratum i (t C yr ⁻¹)	stock of species (0.24 according to 2006 IPCC Guidelines for National Greenhouse Gas Inventories – Ch4 Forest Land), according to Equation 20. This root-to-shoot ratio was used for all strata, including pine plantations. It was correctly inputted in the spreadsheets (Annex AI and AJ).
$\Delta C_{DW,i,t}$	Annual change in the dead wood carbon pool for stratum i (t C yr ⁻¹)	Dead wood carbon pools within the project were calculated in the same manner as the baseline.
$\Delta C_{WP,i,t}$	Annual change in the wood products carbon pool for stratum i (t C yr ⁻¹)	Harvesting is not expected neither under the project scenario in general terms, as confirmed onsite. Then wood products were not calculated for the ex-ante project scenario. When harvesting does occur carbon stocks contained within wood products will be calculated using the same equations than for the baseline.
GHG _{PS,E}	Greenhouse gas emissions as a result of implementation of the proposed IFM project activity within the project area in the project scenario; tCO ₂ -e	Project GHG emissions are equivalent to Non-CO2 emissions due to biomass burning as part of forest management during the year t in the project scenario; t CO ₂ -e ($E_{PS, BiomassBurn,t}$) according to Equation 35. However, no biomass burning will take place within the project area for the duration of the project, then the emissions as a result of the project are zero.
URS	Uncredited Reserve Stock	The project accounts for emissions from the implementation of limited harvesting as allowed by the policies of the PP which include continuous thinning, group selection and patch cuts for the purpose of maintaining forest health. These emissions will be quantified based on measurements of stock change according to the measurement methods required by VM0003 v1.3. Were the total project emissions as a result of harvesting as allowed by policy exceed the quantity of the URS, such excess emissions shall be accounted for in the selected carbon pools and ΔC_i (equation 12). Properly calculated in Annex AL and AK.

Quantification of leakage

Ex-ante Leakage is estimated using VM0003 Methodology Section 8.6.

Quantification of GHG emission reductions and removals, including Parameters at validation		Steps taken to validate the quantification methods
LK	Total GHG emissions due to leakage; tCO ₂ e	According to equation 39 in VM0003 v1.3, Leakage is equal to total GHG emissions due to impacts of project on timber supply and demand (LKMarket Effects, tCO ₂ e), it means, equal to market leakage. AENOR confirmed that it is a correct interpretation.
LK _{Market Effects}	Total GHG emissions due to market- effects leakage through decreased timber harvest; t CO ₂ -e	Using equation 41, was calculated as the difference amongst Actual and Baseline net greenhouse gas removals by sinks, multiplied by Leakage factor for market-effects calculations (LFME). Properly calculated in Annex Q.
LF _{ME}	Leakage factor for market-effects	It was determined by using forest type default values provided by the VM0003 v1.3 for the PAI validated. Within each stratum, the proportion of total biomass in merchantable species (PMPi) is calculated and compared with the mean proportion of total merchantable biomass for each forest type (PMLFT). It was checked by VVB that the merchantable biomass was considered according to the definition in the methodology. After PMPi and PMLFT are calculated and compared, the deduction factors (LFME) determined in the VM0003 v1.3 were used. LFME was determined to be 0.2 for the PAI validated. Properly calculated in Annex Q for the ex-ante values. Default values were correctly inputted in calculation spreadsheet.

An applicability condition of using the VM0003 v1.3 is that the project will not have any leakage because of activity shifting to lands owned by the landowners that are outside the project area (Equation 40). This is an eligibility criteria (#2d): avoiding the leakage by requesting the owner to enroll all its lands. In case of PAI #1024 this was verified during the interview with the owner (Interview #5) and crosschecked with documentary evidence by using geospatial analysis and publicly available land ownership data (Annex AZ), as it also requested in the PP' due diligence process, since the owner does not own any other forested lands. This prevents any activity shifting leakage because the project

proponent and landowner do not have any unenrolled forested lands to shift harvesting onto. It is important to note that for the purposes of defining forestland, the FAO definition is used (Annex AY), where land used predominantly under agricultural or urban land use is not considered forested and may be considered as other land with tree cover.

Uncertainties associated with the calculation of emissions

The determination of sampling error for the purposes of calculating the uncertainty deduction is assessed at the project-level using a 90 percent confidence interval of VM0003 v1.3 (Section 8.7.1). Stratum-level sampling variances are combined to a single project-level sampling variance, weighted by stratum acreage relative to the total project acreage as is standard for stratified samples, following Lohr equation (2014)

For the project and baseline scenario, the included carbon pools for above ground biomass, below ground biomass, wood products and standing dead wood were all either measured as part of the plot-based inventory sample or were modeled based on input inventory data from the plot-based sample. The %SEM (Standard Error of the Mean, in %) is calculated based on plot-based inventory data, and since these pools were measured as part of the same sample, they have the same %SEM. For the project and baseline scenarios, lying dead wood is estimated as part of the transect-based inventory sample, resulting in a distinct sample from the plot-based inventory. Thus, the Lying deadwood pool %SEM is distinctly estimated using the inventory data collected from the transect-based sample.

The accurate calculation of uncertainty was confirmed by the VVB in Annex BA (Uncertainty calculation), as well as the interviews with the team in charge of calculations (Interviews #1-4, Activity #7). The correct application of the forest inventory procedures and QA/QC procedures to reduce uncertainty were checked in field Activities #1-3 above described.

Summary of net GHG emission reductions or removals

Quantification methods that used for GHG emission reductions and removals		Steps taken to validate the quantification methods
C _{IFM}	Net anthropogenic greenhouse gas reductions and removals (t CO ₂ e)	Calculated according equation 42, the net anthropogenic GHG removals by sinks is the actual net GHG removals by sinks minus the baseline net GHG removals by sinks minus leakage. Properly calculated in Annex Q.

The table below forecasts the ex-ante GHG removals and reductions over the first crediting period, validated by VVB in spreadsheet Annex Q. Note that the results below assume the continued expansion of project acreage throughout the project crediting period, from 3,035 hectares as it was expected in 2022 to a total enrollment of 202,347 hectares (increasing until year to 2030). On the other hand, note that the information from the initial 37 plots was used to extrapolate to the entire ex-ante planned area where the projected emissions reductions and removals. Finally, for the years 2021-2023, ex-ante

values reported reflect a plan for PAIs with a historical start date projected for inclusion to the grouped project at initial verification.

Year	Estimated total cohort (ha)	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
2020 (14-07-2020 to 31-12-2020)	3,035	(1,035)	9,899	2,187	8,747
2021	6,070	(4,500)	43,039	9,508	38,031
2022	9,106	(6,750)	64,559	14,262	57,047
2023	12,141	(9,000)	86,078	19,016	76,063
2024	35,917	(26,625)	254,648	56,255	225,019
2025	59,692	(44,250)	423,218	93,494	373,975
2026	83,468	(61,875)	591,788	130,733	522,931
2027	107,244	(79,500)	760,358	167,972	671,887
2028	131,020	(97,125)	928,928	205,211	820,843
2029	154,796	(114,750)	1,097,498	242,450	969,799
2030	178,571	(132,375)	1,266,068	279,689	1,118,755
2031	202,347	(132,375)	1,266,068	279,689	1,118,755
2032	202,347	(132,375)	1,266,068	279,689	1,118,755
2033	202,347	(132,375)	1,266,068	279,689	1,118,755
2034	202,347	(132,375)	1,266,068	279,689	1,118,755
2035	202,347	(132,375)	1,266,068	279,689	1,118,755
2036	202,347	(132,375)	1,266,068	279,689	1,118,755
2037	202,347	(132,375)	1,266,068	279,689	1,118,755
2038	202,347	(132,375)	1,266,068	279,689	1,118,755
2039	202,347	(132,375)	1,266,068	279,689	1,118,755
2040	202,347	(132,375)	1,266,068	279,689	1,118,755
2041	202,347	(132,375)	1,266,068	279,689	1,118,755
2042	202,347	(132,375)	1,266,068	279,689	1,118,755
2043	202,347	(132,375)	1,266,068	279,689	1,118,755
2044	202,347	(132,375)	1,266,068	279,689	1,118,755

2045 (01-01-2045 to 13-07-2045)	202,347	(71,483)	683,677	151,032	604,127
Total	202,347	(2,502,518)	23,934,715	5,287,447	21,149,786

As a clarification, using VM0003 v1.3 Equations 1, 2, 3, 4, and 5, ΔC_{BSL} , the baseline net greenhouse gas removals by sinks (tCO₂e) was calculated for the project. The values for $\Delta C_{BSL,tree}$, $\Delta C_{BSL,WP}$, and $\Delta C_{BSL,DW}$ each had negative changes to the carbon stock in the baseline scenario, leading to ΔC_{BSL} being negative. This leads to the negative values in baseline emissions.

Harvesting in PAIs is prohibited without the consent of the PP, according to Eligibility criterion #5, and it maintains a policy that limits the application of harvesting to techniques that promote ERA, as demonstrated in FCW Membership Guide and FCW Harvesting Policy (Annex AR). Harvesting associated with the project activity shall not meet nor exceed the definition of harvest activity (according to VCS Program Definitions v4.3) meaning that the harvesting of trees or vegetation within each PAI shall not reduce carbon stocks by 20% or more during any 5-year period, unless applies the long-term average (according to VCS Standard v4.4).

However, all future harvesting conducted within the project will be designed to maximize carbon storage and/or improve forest health, and to transition forests to uneven-aged structure. This shift from even-aged to uneven-aged forest management will involve an increase in the average age of standing trees within the forest since the goal of the project is to sequester more carbon than currently exists with the project activity instances. On the other hand, approximately 10% of total carbon in the standing forest is reserved by PP from crediting to provide flexibility for members to engage in climate smart forestry treatments while minimizing the impact on annual payments. This shows that, under the assumptions planned by the PP, the application of the long-term average would not proceed.

The audit team concludes the following with respect to the PD:

Assessment of whether...	Conclusion
All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD.	The audit team was able to confirm the data and parameter assumptions used in the estimates of baseline emissions, and confirms that the baseline emissions can be replicated using the input data provided for validation with the parameters, and processes described in the PD.
All relevant assumptions and data are listed in the PD, including their references and sources.	The audit team confirms that all relevant assumptions and data as well as their references and relevant sources are documented clearly in the PD.
All data and parameter values used in the PD are considered reasonable in the	The audit team has concluded that the values presented in the PD are reasonable in the context of the project.

context of the project.	This was concluded after review of the data and parameter values presented in the PD, as well as independent review of documentation, interviews and onsite visit (references above).
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Overall Conclusion

In conclusion, the methodology and any referenced tools have been applied correctly to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals during the project crediting period.

3.3.7 Methodology Deviations

The project deviates from the procedures set out in VM0003 v1.3 by applying one methodology deviation:

Deviation #1

Description of the deviation	The PP proposed an alternative method related to the criteria and procedures for monitoring that is more efficient for project-specific circumstance. The Uncredited Reserve Stock (URS) is a division of the above ground biomass and standing dead wood carbon pools. URS represents a small portion of project carbon stocks that are subject to the project activity but will conservatively do not count towards VCU accounting or issuance. The URS is calculated as 9% of the initial carbon stock of all PAIs as quantified at the time of addition of each PAI to the grouped project. Contributions to (once upon enrollment into the grouped project) and depletions from, the URS are tracked at the PAI level. The balance of the uncredited reserve stock must be included in all future monitoring reports and the balance shall be within the scope of verification however not a selected pool. The purpose of the URS is to establish a dedicated carbon pool that can be depleted to account for carbon removed from the project boundary due to limited harvesting activities to promote forest health according to the policies of FCW, such as limited continuous thinning, which aim to maintain forest vigor and improve structural characteristics to the benefit of added carbon removal by residual trees over time.
Whether the deviation meets with the criteria and specifications for permitted methodology deviations.	The deviation does not have an impact on the applicability conditions, additionality, or the appropriateness of the baseline scenario; only in the monitoring criteria and procedures. Thus, in opinion of the VVB, the deviation meets with the criteria and

	specifications for permitted methodology deviations in section 3.19 of VCS standard v4.4.
Whether the deviation negatively impacts the conservativeness of the quantification of GHG emission reductions or removals (except where they result in increased accuracy).	The deviation achieves the same level of accuracy and results and is more conservative than what is set out in the methodology: there is no change in the calculation of uncertainty, as it was confirmed by the VVB in the comparison of both uncertainty scenarios: URS vs. no-URS (AJ. FCW Conserve TL v0.12 - PAI 1024; Annex AI. FCW Conserve TL v0.12 - PAI 1024 - No URS). The conservativeness is ensured since it reduces crediting of emissions in the baseline scenario relative to the outcome where it had not been deducted. The comparison amongst the scenarios with-URS and without-URS in the inventory and ex-ante calculations was checked by the VVB (Annex AK. FCW Conserve Ex-Post Accounting Model v0.3.xlsm, Annex AL. FCW Conserve Ex-Post Accounting Model v0.3 - No URS.xlsm, Annex AM. FCW Conserve Model Results v1.0 - PAI 1024 - No URS.xlsx, Annex AN. FCW Conserve Model Results v1.0 - PAI 1024.xlsx), which proves the deviation does not result in an overestimation of net GHG emissions reductions or removals and is therefore conservative. The parameter to be monitored was defined in section 5.2 of the PD. Thus, in opinion of the VVB the deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.

Thus, in opinion of AENOR, the deviation #1 is acceptable.

3.3.8 Monitoring Plan

The parameters to be monitored during the verifications are as follows:

Parameter to be monitored	Description (Unit)
A _i	Area of stratum <i>i</i> (Hectares)
A _p	Area of sample plot (Hectares/Acres)
D _{n,i,t}	Diameter of piece <i>n</i> of dead wood along the transect in stratum <i>i</i> , at time <i>t</i> (cm)
DBH	Diameter at breast height of tree (4.5 ft.) above 5 inches at DBH and above (cm)
H	Height of tree (m)
L	Length of the transect to determine volume of lying dead wood (cm)

N	Total number of wood pieces intersecting the transect (Dimensionless)
PMP _i	Merchantable biomass as a proportion of total above ground tree biomass for stratum <i>i</i> within the project boundaries (%)
T	Number of years between monitoring period time <i>t</i> 2 and <i>t</i> 1 ($T = t_2 - t_1$) (year)
URS	Uncredited Reserve Stock (tCO ₂ e)

A monitoring plan, consistent with the requirements of the methodology, is provided in Section 5.3 of the PD. The audit team took the following steps to validate the suitability of the implemented monitoring system:

- The audit team confirmed during interviews (Interviews #1-4) and the onsite visit (Activity #3) that the project team has an appropriate level of skill and ability to carry out the monitoring tasks as described, based on the guide “2022 Forest Cruiser Training v1.1.pptx” (Annex L) to collect data, and “Nephos Digitization Manual.pdf” (Annex L) to process field data.
- Through review of section 5.3 Monitoring Plan of the PD, the Members Guide (Annex AR) and the adaptive management plan (Annex T), the audit team can confirm that monitoring procedures are described with an appropriate degree of certainty. All monitoring procedures are appropriate to the stated task.
- The audit team confirmed that the scope, description, and general requirements of the monitoring plan (section 5.3 in PD) are in conformance with the methodology and relevant monitoring modules. It includes all the parameters to be monitored according VM0003 v1.3, including: Source of data, Description of measurement methods and procedures to be applied, Frequency of monitoring/ recording, Value applied, Monitoring equipment, QA/QC procedures to be applied, Calculation method.
- The audit team confirmed through interviews with the project team (Interviews #1-4) that the datasets, field survey, and data management approaches that the Project proposes for monitoring of carbon stock changes are currently available and feasible and will continue to be available through the crediting period.
- Confirmed the ownership through the individual agreements between the PP and property owner (Forest Management Lease Agreements) in Annex D for the current PAI #1024, as well as the owner’ property deeds in Annex AT. AENOR confirmed that the PP has the right to continue to implement, monitor and manage project activities during the crediting period and the project longevity.
- Through review of the PD and interviews with the project proponent the audit team confirmed that a robust QA/QC plan (described parameter in section 5.2 of PD and Annex AD) is in place to ensure quality data is used for monitoring parameters relevant to the project.

After the review of evidence provided by the PP, interviews and onsite visit, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for the implementation, including data management, quality and assurance control procedures, are sufficient to ensure that the GHG net anthropogenic removals achieved resulting from the proposed VCS project activity can be reported ex post and verified. Therefore, in opinion of the AENOR team, the PP is able to implement the monitoring plan.

3.4 Non-Permanence Risk Analysis

PP has elaborated a VCS Non permanence Risk Report (Annex V) for the validation process according to the AFOLU Non-Permanence Risk Tool v4.0. Note that the NPRR is based in the current validated PAI #1024. In the future, when other PAIs join the Project it may be in other US States, and the requirements related to geographic areas of grouped projects of VCS Standard v4.4 and the definition of the AFOLU Non-Permanence Risk Tool 4.0 in VCS, will be enforced, in order to gather under the same 'designated geographic area' the similar PAIs in order to apply a Non Permanence Risk assessment and a buffer in each one.

Below, it is explained the assessment and the issues raised on regard the non-permanence risk rating determined by the PP in the report version 1.1.

Risk factor	Risk Rating	Assessment of rationale, assumptions and justification, and quality of documentation and data provided
Project Management: It is assessed using table 1 of the VCS AFOLU Risk Tool.	-4 (total may be less than zero)	a) No planting is planned as part of the project, as checked along the PD and during the onsite visit of the VVB. Risk rating=0 is justified. b) Land tenure is clear, and there are no land use rights disputes or encroachments risks, as checked in property deeds (Annex AT), GIS data base (Annex AS, N), onsite visit (Activity #1), and interview with owner and PP (Interview #1, #5). Risk rating=0 is justified. c) In accordance with the evidence provided (Interviews #1-4, 13), Management team includes individuals with significant experience in all skills necessary to successfully undertake all project activities and monitoring (Activity #3). Risk rating=0 is justified. d) The PP has HQ in US. Management team maintains permanent presence in the regions, as verified in interviews with local staff (Interview #4) and owner (Interview #5). Risk rating=0 is justified. e) Management team of FCW includes individuals with significant experience in forest management and have significant experience in AFOLU project design and implementation, carbon accounting and reporting, as showed during the interviews (Interviews #1-4) Risk rating=-2 is justified.

Risk factor	Risk Rating	Assessment of rationale, assumptions and justification, and quality of documentation and data provided
		f) There is adaptive management plan in place (Adaptive Management Plan in Annex T) that complies with the definition in the NPR Tool. Risk rating=-2 is justified.
Financial viability: It is assessed using table 2 of the VCS AFOLU Risk Tool.	1 (total may not be less than zero)	a) Project cash flow breakeven point is greater than 10 years from the current risk assessment. VVB verified that breakeven at year 21 (Annex U and Interview #1). Risk rating=3 is justified. b-d) Not applicable, see above. e-g) Not applicable, see below. h) Project has secured 80% or more of funding needed to cover the total cash out required before the project reaches breakeven (verified in Annex U by VVB and Interview #1). Risk rating=0 is justified. i) Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven (demonstrated in Annex U and Interview #1). Risk rating=-2 is justified.
Opportunity Cost: It is assessed using table 3 of the VCS AFOLU Risk Tool.	6 (total may be less than zero)	a) NPV from project activities is expected to be 100% more profitable than the most profitable alternative land use activity (checked in Annex AH and interviews with owner, PP and forester –Interview #1, 5, 6-, were baseline activity is modeled over 100% more productive than project activity. The baseline scenario was chosen as the alternative scenario with the highest financial profit, which is intensive harvest. Profits from modeled baseline are 109% higher than the project scenario. Risk rating=8 is justified. b-g) Not applicable. h) Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period, as demonstrated in Annex D and interview with the owner and PP (Interview #1, 5). All landowners participating in the project shall participate in the agreement that the landowner shall continue forest management practices that protect credited carbon stocks for at least 60 years. Risk rating=-2 is justified. i) Not applicable. Although some PAI may elect to protect carbon stocks for 100 years, some do not, so this mitigation measure was conservatively excluded.
Project Longevity: It is assessed using	0 (total may not be less than zero)	a) Not applicable, see below. b) Without legal agreement or requirement to continue the

Risk factor	Risk Rating	Assessment of rationale, assumptions and justification, and quality of documentation and data provided
table 4 of the VCS AFOLU Risk Tool.		management practice. All landowners participating in the project shall participate in the agreement that the landowner shall continue forest management practices that protect credited carbon stocks for at least 60 years, which is the project longevity (verified in the signed agreements in Annex D and Interviews #1, 5). Risk rating=0 is justified (30-30/2).
Land Tenure and resources access/impact: It shall be assessed using table 6 of the Risk Tool.	0 (total may not be less than zero)	a) Ownership and resource access/use rights are held by same entity(s) as demonstrated in the signed agreements in Annex D, property deeds in Annex AT and Interviews #1, 5. Risk rating=0 is justified (30-30/2). b) Not applicable, see above. c)-d) There are no disputes over land tenure or ownership of the project area in more than 5 % of the project area nor disputes over access/use rights (or overlapping rights), according to the signed agreements in Annex D, property deeds in Annex AT, GIS database (Annex AS, N), and Interview with PP and owner #1, 5, and local staff (Interview #4). Risk rating=0 is justified. e) Not applicable. f) Project area is protected by legally binding commitment to continue management practices that protect carbon stocks over the length of the project crediting period. Landowner participate in the agreement that the landowner shall continue forest management practices that protect credited carbon stocks for at least 60 years, which is the project longevity (verified in the signed agreements in Annex D and Interviews #1, 5). Risk rating=-2 is justified. g) Not applicable. See above.
Community engagement: It shall be assessed using table 7 of the Risk Tool.	0 (total may be less than zero)	a) The properties where the project area is located consist of the forested and other uses (reforestation, cattle) areas and therefore no one lives in the project area. On the other hand, the communities in the area of influence do not depend on the services or goods of these areas and have no rights over them. Confirmed during the onsite visit. Last, there are no third parties with any right of use over the land. Risk rating=0 is justified. c) Not applicable.
Political Risks: It shall be assessed using table 8 of the Risk Tool.	0 (total may not be less than zero)	a-d) Not applicable, see below. e) USA presents 1.24 according to the World Bank Institute's Worldwide Governance Indicators. VVB verified the value and reliability of source (World Bank Institute Worldwide Governance Indicators website).

Risk factor	Risk Rating	Assessment of rationale, assumptions and justification, and quality of documentation and data provided
		Risk rating=0 is justified. f) The country has an established national FSC or PEFC standards body, as checked independently by VVB. Risk rating=-2 is justified.
Fire Risk: It shall be assessed using table 10 of the Risk Tool.	LS*M=5	Significance: Major. Reviewed scientific articles justify the choice and are deemed applicable and reliable, in opinion of the VVB. Likelihood: Every 10 to less than 25 years. A conservative choice has been done, according to reviewed scientific articles justify the choice and are deemed applicable and reliable, in opinion of the VVB. Thus LS= 5 is reasonable. Mitigation (M) measures: No applicable. Then, M=1 is reasonable.
Pest and disease outbreaks: It shall be assessed using table 10 of the Risk tool.	LS*M=5	Significance: Major. Reviewed scientific articles justify the choice and are deemed applicable and reliable, in opinion of the VVB. Likelihood: Every 10 to less than 25 years. A conservative choice has been done, according to reviewed scientific articles justify the choice and are deemed applicable and reliable, in opinion of the VVB. Thus LS= 5 is reasonable. Mitigation (M) measures: No applicable. Then, M=1 is reasonable.
Extreme weather: It shall be assessed using table 10 of the Risk tool.	LS*M=2	Significance: Minor. Reviewed scientific articles justify the choice and are deemed applicable and reliable, in opinion of the VVB. Likelihood: Every 10 to less than 25 years. A conservative choice has been done, according to reviewed scientific articles justify the choice and are deemed applicable and reliable, in opinion of the VVB. Thus LS= 2 is reasonable. Mitigation (M) measures: No applicable. Then, M=1 is reasonable.
Geological risks: It shall be assessed using table 10 of the Risk Tool.	LS*M=0	No carbon stock losses expected to be cause by geological risks. Is not a risk in the current states included, as verified by VVB. Thus LS= 0 is reasonable. Mitigation (M) measures: No applicable. Then, M=1 is reasonable.

The total final non-permanence risk is 15%. AENOR has checked that information provided in the Non-Permanence Risk Report (Annex V and scientific articles linked) is consistent with the support documents provided, and each risk factor was thoroughly assessed for conformance against proper rationale, assumptions and justifications. AENOR deems that information provided is reliable and appropriate. Thus, the overall risk rating is credible and realistic and a 15% buffer is determined.

4 VALIDATION OPINION

AENOR performed the validation of Family Forest Carbon Project and has confirmed that the project is in compliance with the Verified Carbon Standard version 4.4 without qualifications or limitations. The validation of the GHG statement was conducted in accordance with ISO 14064-3:2019. GHG statement is the responsibility of Forest Carbon Works, PBC.

The validation process was performed on the basis of all issues and criteria of VCS. The conclusions of this report show that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.

AENOR assessed and confirms that the assumptions, limitations, and methods described in the PD support the claim about the outcome of the Project activities, and the Project is likely to achieve estimated GHG emission reduction or removals. Either way, ex ante results may vary since the estimates are based on assumptions that are subject to change.

Validated GHG emission reductions and removals in the crediting period 14 July 2020 – 13 July 2045:

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
2020 (14-07-2020 to 31-12-2020)	8,747
2021	38,031
2022	57,047
2023	76,063
2024	225,019
2025	373,975
2026	522,931
2027	671,887
2028	820,843
2029	969,799
2030	1,118,755
2031	1,118,755
2032	1,118,755
2033	1,118,755
2034	1,118,755
2035	1,118,755

2036	1,118,755
2037	1,118,755
2038	1,118,755
2039	1,118,755
2040	1,118,755
2041	1,118,755
2042	1,118,755
2043	1,118,755
2044	1,118,755
2045 (01-01-2045 to 13-07-2045)	604,127
Total estimated ERs	21,149,786
Total number of crediting years	25
Average annual ERs	845,991

Date: 31 January 2024



Carlos Jiménez
Validation Leader

APPENDIX:

Corrective Action Requests (CAR)

NC ID:	01	Date: 31/07/2023
Description of NC		
Section PD 1.4: 1- Table 4. Justification of compliance with Eligibility Criterion 2j is missing. 2- EC #2 and #7: some references to the content of Annex D do not exist (1.1.3, 1.4, 6.5, etc.). Please, review it the reference to the clause is correct or clarify. 3- OBS: EC #3. "See section 7.2: Baseline Emissions of Joint PD...". It is not section 7.2. The doc is not "Joint".		
Project Participant response		Date: 08/08/2023
The PD template requires accurate and complete information to be included in PD section 1.4. To ensure this, the following revisions were made: 1. Justification of compliance with EC 2j has now been provided. This is also referenced in PD section 1.4. 2. References to Annex D, as they relate to EC #2 and #7, have been updated to correctly identify relevant clauses in the Forest Management Lease Agreement. 3. References related to EC #3 have been updated to correctly identify supporting sections in the PD.		
Documentation provided by the Project Participant		
• FCW Project Description v1.2		
VVB Assessment		Date: 15/08/2023
Closed. 1- Evidences for compliance with request 2j in aTable 4 were provided and deemed correct. 2- Reference to sections in MLA were corrected. 3- Observation attended.		

NC ID:	02	Date: 31/07/2023
Description of NC		
Section PD 1.8: 1- License agreement (date in July 14th 2020) referred in this section is not provided amongst the Annexes. 2- "the MLA is legally enforceable, requiring the application of ERA for the duration of the crediting period according to the policies of Forest Carbon Works". In the same way, in PD 1.11, "Forest Carbon Works maintains a policy that limits the application of harvesting to techniques that promote ERA". Please, clarify what are these policies? On the other hand, a Forest Management Plan for the current PAI 1024 is not provided.		

Project Participant response	Date: 08/08/2023
1. The PD template requires complete information and documents to be included. Revisions were made to PD Section 1.8 to reference Annex AV that now contains the license agreement. The license agreement was signed on July 14th, 2020. 2. The PD template requires complete information to be included in PD section 1.11. Revisions were made to PD section 1.11 to add clarity regarding extension of rotation age and the policies contained within the harvest policy section of the membership guide, annex AR. The membership guide is legally enforced by Annex D. Per Eligibility Criterion 7, an FSC Forest Management Plan is not required as there is no planned commercial harvesting in the immediate future. Annex D serves as the easement that prohibits commercial harvesting for the duration of the crediting period, unless the PAI is later certified to FSC.	
Documentation provided by the Project Participant	
• FCW Project Description v1.2 • Annex AV	
VVB Assessment	Date: 15/08/2023
Closed. 1- Annex AV (license agreement) was provided. 2- Section 1.11 was completed according to the request. A forest management plan is not yet needed, on the other hand.	

NC ID:	03	Date: 31/07/2023
Description of NC		
Section PD 2.2: Please, state clearly if: “How due account of all and any input received during the consultation has been taken. Include details on any updates to the project design or justify why updates are not appropriate”, particularly regarding the PAI 1024 that is being validated now.		
Project Participant response		Date: 08/08/2023
Per section 2.2 of the VCS Project Description Template v4.2, the project description should include details of how “due account of all and any input received during the consultation has been taken. Include details on any updates to the project design or justify why updates are not appropriate.” Section 3.18.3-3.18.5 of the VCS Standard states that the project proponent must provide stakeholders the ability to communicate comments pertaining to project design to the project proponent. Phone, text, email, and in-person communications options were made available to the landowner, as was the grievance redress procedure as described in section 2.5 of the project description, which is open to all stakeholders. The standard also requires that the “project proponent shall take due account of all and any input received during the local stakeholder consultation and through ongoing communications, which means it will need to either update the project design or justify why updates are not appropriate”. As included in the section 2.2 of the Project Description the main form of correspondence and avenue FCW provides for input, consultation, and project design feedback is through discussions with member specialists and regional foresters through the phone, in person, or email. Continued correspondence with the major stakeholder did not identify or necessitate any updates to the project design. Additional information regarding the lack of comments received has been added to PD section 2.2.		
Documentation provided by the Project Participant		

FCW Project Description v1.2	
VVB Assessment	Date: 15/08/2023
Closed. Section 2.2 was updated to clarify that no comments by the stakeholders were received, which was also crosschecked during the onsite visit.	

NC ID:	04	Date: 31/07/2023
Description of NC		
Section PD 3.2: Table 9, applicability condition: For “Forest management in both the baseline and project scenario involves harvesting techniques such as clear cuts, patch cuts, seed tree, continuous thinning or group selection practices” it is responded “Per Eligibility Criterion 5, the project scenario must include techniques such as patch cuts, continuous thinning or group selection practices according to a policy maintained by the project proponent (see Annex H)”. Annex H corresponds to a similar forest management plan, not the PP forest management plan, which has not been provided.		
Project Participant response		Date: 08/08/2023
The PD template requires complete and accurate information to be included in PD Section 3.2. To ensure this, the Annex reference in Table 9 was updated from Annex H to Annex AR. Annex AR provides the Forest Carbon Works Membership Guide, which outlines the policy (see Harvest Policy section of the Membership Guide) that the project proponent maintains that limits harvest techniques used in the Project Area as required by Eligibility Criterion #5. This resolves the NC by providing alternative evidence to demonstrate that Eligibility Criterion #5 is satisfied.		
Documentation provided by the Project Participant		
- FCW Project Description v1.2 - Annex AR		
VVB Assessment		Date: 15/08/2023
Closed. The PP provided the Forest Carbon Works Membership Guide, which outlines the request of the applicability condition (since a forest management plan is not yet needed).		

NC ID:	05	Date: 31/07/2023
Description of NC		
Section PD 3.3: A shape file of Figure 2 (boundaries, forest strata, stream, etc.) is not provided. Note than Annex N provided do not correspond exactly to the figure.		
Project Participant response		Date: 08/08/2023
The PD Template requires accurate and complete information to be included in PD section 3.3. The following supplemental information to section 3.3 was added to ensure references and documents are accurate and complete. The shapefile “PAI1024_Mus” seen in Fig. 2 was added to a new annex – AS. This shapefile contains all information displayed in figure 2 including the stream management zones, other constraints impacting the project, hectareage/acreage, and all strata. A reference to Annex AS		

was also added to the figure 2 description within the PD. 2. Annex N was revised to include a project area shapefile - "PAI1024_Project" which accurately depicts the hectareage/acreage designated as forested area. The existing tax parcel shapefile was also updated to include only what is owned by the landowner associated with PAI 1024. Both shapefiles are located within a zipped folder named "PAI1024_Project+TaxParcels"	
Documentation provided by the Project Participant	
- FCW Project Description v1.2 - Annex AS: PAI1024_MU - Annex N: PAI1024_Project+TaxParcels	
VVB Assessment	Date: 15/08/2023
Closed. The shapefile requested was provided (Annex AS) and Annex N was updated and deemed appropriate.	

NC ID:	06	Date: 31/07/2023
Description of NC		
Section PD 3.4: Demonstration of additionality is an objective of the validation itself, this means that this section has to be referred in general terms for the upcoming PAIs, but also specifically for the current added PAI. During the verifications, the new PAIs will be validated at the time, but the PAI 1024 is being validated in this current process. 1- It is mentioned that "To validate the baseline scenario, a comparable timber harvesting plan (THP) is required for each PAI as demonstration of common practice per Eligibility Criterion 6 (see Section 1.4)". Please, A) Refer the Annex provided in the text (Annex H), B) Provide a comprehensive rationale on why it is comparable with the baseline scenario in the current PAI added. 2- Provide the attestation signed by the independent forester regarding PAI 1024 (refer it also in the text) and its resume. Indicate in the text a rationale for A) its independency, B) how it reached the conclusion regarding the plausibility of the baseline scenario. 3- Provide a rationale in the text to prove that harvest volumes in the project scenario are assumed to be less than the baseline scenario. 4- OBS: "To comply with VCS Standard V4.2 Section 3.2.7". Update to proper version and section.		
Project Participant response		Date: 08/08/2023
The PD template requires accurate and complete information to be included in PD section 3.4. To ensure this, the following revisions were made: 1. A) References have been added to section 3.4 for Annex H. B) A description of how the provided forest management plan is similar to the baseline silviculture has now been included in section 3.4. 2. The signed forester attestation has now been provided in Annex AU. The attestation, and annex location, has also been referenced in section 3.4 of the PD. A) Language describing the independency of the Forester Attestation has now been included in section 3.4. B) A description of how the independent forester reached their conclusions regarding the plausibility of the baseline scenario has now been included. 3. Language has been added to section 3.4 describing the rationale for why harvest volumes in the project scenario will always be less than the baseline scenario.		

4. References related to the baseline reassessment now use the most up-to-date version of the VCS Standard (VCS Standard V4.4 Section 3.2.7)	
Documentation provided by the Project Participant	
- FCW Project Description v1.2 - Annex AT - Annex AU - Annex H	
VVB Assessment	Date: 15/08/2023
1- Closed. A reference to the Annex H was included in the text. An explanation and further evidence on how both plans are comparable are provided. 2- Closed. An independent forester attestation and its CVs was provided. Explanatory text was included. 3- Closed. A rationale in the text to prove that harvest volumes in the project scenario are less than in the baseline scenario was provided. 4- Closed. The reference was corrected.	
Project Participant response	Date: 17/08/2023
1. The content of Annex H in Appendix C has been updated to reflect all materials included in the most recent submission. 2. The content of Annex AU in Appendix C has been updated to reflect all materials included in the most recent submission.	
Documentation provided by the Project Participant	
FCW Project Description v1.3	

NC ID:	07	Date: 31/07/2023
Description of NC		
Section PD 4.3: 1- PMLFT, PMPi, LFME for PAI 1024 has not been indicated in the text. 2- Since the owner of the property is different to the Project Proponent, provide evidence (and include the explanation in the text) that the landowner enrolled all forested areas in the project, resulting in no activity shifting leakage. 3- Please, review the numbers of the equations in PD related to Leakages (regarding the numbering VM0003).		
Project Participant response		Date: 08/08/2023
1- Per the PD Template Section 4.3," Describe the procedure for quantification of leakage emissions in accordance with the applied methodology. Include all relevant equations and explain and justify all relevant methodological choices." To comply with this requirement, PMLFT, PMPi, LFME for PAI 1024 have been added to the text in PD Section 4.3. This satisfies the requirement by providing the relevant values used in leakage calculation equations. 2- Per VM0003 Methodology Section 8.6.1, leakage due to activity shifting is not permitted. References to Annex D (MLA), Annex AY, and Annex AZ were added to PD Section 4.3 as evidence that the landowner enrolled all eligible forested areas to the project, resulting in no activity shifting leakage. Clarification was also added that the project proponent does not own any eligible forested lands. The landowner for PAI 1024 owns approximately 5 acres of land in Kitsap County, 1.75 of which has tree cover. However, per the FAO definition of forest, found in		

Annex AX,"[i]t does not include land that is predominantly under... urban land use." This excludes the Kitsap County property because it is the landowner 's primary residence and therefore not classified as a forest, This addresses the nonconformity by providing evidence that no activity shifting leakage will occur onto other forestlands. 3- Per the PD template Section 4.3,"Include all relevant equations". Equation numbers in PD Section 4.3 were updated to reflect those in VM0003 Methodology v1.3. This addresses the nonconformity by ensuring that all equations used are numbered and that the numbering of the equations listed in the PD aligns with the numbering in the most recent version of the methodology.	
Documentation provided by the Project Participant	
FCW Project Description v1.2	
VVB Assessment	Date: 15/08/2023
1- Closed. PMLFT, PMPi, LFME for PAI 1024 has been indicated in the text- 2- Not closed. Although an explanation and reference to evidence has been provided in the text, which was confirmed during the interviews, the <u>two files in Annex AZ cannot be opened</u>. Also please complete evidence provide in Annex AZ row of Appendix C. 3- Closed. Equations numbers corrected. 4- NEW: Reference to VCS Standards 3.14.8 & 3.14.9 is not correct.	
Project Participant response	Date: 17/08/2023
1- Closed. 2- Per VM0003 methodology Section 8.6.1, leakage due to activity shifting is not permitted. Annex AZ was updated to provide working files that provide proof that the landowner has enrolled all their eligible forested land in the project, thereby eliminating the possibility of activity shifting leakage from occurring. Additionally, Appendix C was updated to state that Annex AZ contains "Proof of forested area enrollment." This addresses the nonconformity by providing working proof that activity shifting leakage cannot occur for the enrolled PAI. 3- Closed. 4- VCS Standards 3.14.8 and 3.14.9 do not exist. VCS Standard 3.15.8 states, "Market leakage assessments shall occur in accordance with the requirements set out in the applied methodology(s) at validation and verification." VCS Standard 3.15.9 states, "Notwithstanding the requirement set out in Section 3.15.8 above, IFM projects may apply the appropriate market leakage discount factor identified in Table 3 to the net change in carbon stock associated with the activity that reduces timber harvest to determine market leakage." PD Section 3.4 was updated to reflect the VCS Standard in standards 3.15.8 and 3.15.9, not 3.14.8 and 3.14.9. This resolves the finding by providing a reference to the relevant standard in the VCS Standard.	
Documentation provided by the Project Participant	
- FCW Project Description v1.3 - Annex AZ	
VVB Assessment	Date: 29/08/2023
2. Closed. Evidence were provided and Annex was updated. 4. Closed. References to standard were corrected.	

NC ID:	08	Date: 31/07/2023
Description of NC		

Section PD 4.4: 1- Equation 42 VM0003 v1.3 is missing in this section. 2- Indicate the plots and methods for the inventory (sample size, plot location, etc.). 3- In table 13, include a column and an explanation regarding the expansion plan in terms of area (in section 1.1 is stated that “Forest Carbon Works anticipates protecting 500,000 acres of land owned by many individuals with durable agreements of permanent carbon storage”). 4- Refer to the Annexes in which the information is located. 5- In section 4.4.1 please include the calculation process of the uncertainty for the ex-ante estimations and indicate the uncertainty deduction. 6- In table 13 (and 7), indicate for 2020 and 2045 the exact dates.	
Project Participant response	Date: 08/08/2023
1- Per the VM0003 Methodology all relevant equations must be included in the PD. Thus, Equation 42 from VM0003 v1.3, $C_{IFM} = \Delta C_{Actual} - \Delta C_{BSL} - L K$, has been added to PD section 4.4 as well as accompanying explanation. 2- Per the VM0003 Methodology, inventory data used for the creation of the baseline must be included in the PD. Plot locations and sample sizes have been added in Annex BC and a text explanation has been added to PD section 4.4. 3- Per the VCS Project Description Template, a column has been added to table 13 to show area expansion of the Project as well as added text explanation. 4- Information on area expansion is located in Annex Q. 5- As per the VM0003 methodology, the full calculation process for uncertainty has been added to Annex BA and additional explanation is included in section 4.4.1 6- Per VCS Project Description Template v4.2, exact dates have been added to table 7 and 13.	
Documentation provided by the Project Participant	
• FCW Project Description v1.2 • Annex BA • Annex BC • Annex Q	
VVB Assessment	Date: 15/08/2023
1- Closed. Equation included. 2- No closed. Although an explanation regarding the plot location has been included, an explanation on how the number of plots (sample size) using the A/R CDM tool is still missing. 3- Closed. Table 13 completed with land increase forecast. 4- Closed. Reference included. 5- Closed. Annex BA has been added to section 4.4.1 within the text. 6- Not closed. Year 2045 has not been corrected.	
Project Participant response	Date: 17/08/2023
2- The VM0003 Methodology utilizes the “Calculation of the number of sample plots for measurements within A/R CDM project activities Version: 02.1.0” tool to determine sample size. Further language has been added to Section 4.4 to include the method of estimation of sample size using the A/R CDM tool, the results from the tool, and to clarify that it was based up on ex-ante estimations at a target precision of +/- 10% of the mean at a 90% confidence level. 6- Per VCS Project Description Template v4.2, exact dates have been added to table 17 and table 7 (formally known as table 13). Exact dates for both 2020 and 2045 have been included.	
Documentation provided by the Project Participant	

FCW Project Description v1.3	
VVB Assessment	Date: 29/08/2023
2- Closed. An explanation on how the number of plots (sample size) using the A/R CDM tool was included. 6- Closed. Date was corrected.	

NC ID:	09	Date: 31/07/2023
Description of NC		
NPR Report: 1- Opportunity Cost. "Profits from modeled baseline are 167% higher than the project scenario". According to Annex AH, that is not the % of difference.		
Project Participant response		Date: 08/08/2023
The NPRR template requires accurate and complete information to be included. To ensure this, the following revisions were made to the NPRR: The Opportunity cost section of the NPRR has been updated to reflect the 109% difference between the project scenario and the baseline scenario. Annex V and Annex AH are now aligned.		
Documentation provided by the Project Participant		
- FCW Project Description v1.2 - Annex V		
VVB Assessment		Date: 15/08/2023
Closed. The NPR was updated accordingly. The NPR rate did not change.		

Clarifications (CLs)

CL ID	01	Date: 31/07/2023
Description of the CL		
Section PD 1.11: 1- "To determine treatments, the project proponent, in conjunction with researchers at the University of Minnesota, will be assessing the recruitment, longevity, management, and carbon storage associated with management activities that add snags to forested landscapes". Please, provide any MoU regarding this relation or article to prove the intention of collaboration. 2- Please, clarify if any specific rotation age is planned and what was the previous one (baseline scenario) or provide clarification in that regard.		
Project Participant response		Date: 08/08/2023
- The research statement for snag management activities has now been included in Annex AW. The updated materials are also referenced in the text of section 1.11 of the PD. - Additional language has been added to section 1.11 clarifying that: - There is no rotation age associated with the project activity as even-aged forest		

management will not be practiced. Rotation ages within baseline scenarios will differ among activity instances and will be dependent on common forest management practices in the geographic area.	
Documentation provided by the Project participant	
- FCW Project Description v1.2 - Annex AW	
VVB Assessment	Date: 15/08/2023
1. Closed. A statement regarding the intention of collaboration with University of Minnesota was provided. 2- Closed. Clarification provided in the text.	

CL ID	02	Date: 31/07/2023
Description of the CL		
Section PD 1.12: “As described in Section 1.4, Eligibility Criterion 5, the geographic area for the grouped project is the contiguous United States and southern Alaska”. It is not Criterion 5 the one related.		
Project Participant response		Date: 08/08/2023
The section of the PD has been updated to reflect the correct eligibility criterion, EC #4.		
Documentation provided by the Project participant		
FCW Project Description v1.2		
VVB Assessment		Date: 15/08/2023
Closed. The reference has been corrected.		

CL ID	03	Date: 31/07/2023
Description of the CL		
Section PD 1.14: “Federal Water Pollution Control Act (33 U.S.C § 1251 et seq.) establishes objectives for improving water quality and regulates pollution into waterways. Project activities encourage the ongoing improvement of stream water quality, and forest management plans intend to follow maximum state forestry recommendations for watershed quality protection, as required per Eligibility Criteria 3e and 4”. Please, review the number of the Criteria mentioned.		
Project Participant response		Date: 08/03/2023
The section of the PD has been updated to reflect the correct eligibility criteria.		
Documentation provided by the Project participant		
FCW Project Description v1.2		
VVB Assessment		Date: 15/08/2023

Closed. The reference has been corrected.

CL ID	04	Date: 31/07/2023
Description of the CL		
Section PD 1.17: The project's contributions to SDGs #3, #11 and #17 are unclear. Please, 1) indicate exactly the direct contribution of the project to the mentioned indicators: 3.9, 11.7, 17.17 and 2) the way in which its results directly related to the project can be monitored and the unit of measurement of its contribution. Please note that for all validated SDGs it will be necessary to report consistent contributions during verifications.		
Project Participant response		Date: 08/08/2023
A new table was added to PD Section 1.17, providing clarification on direct contributions of the project to all named SDG indicators and the method of measuring project activity results. The indicators 3.9, 11.7, and 17.17 were removed.		
Documentation provided by the Project participant		
FCW Project Description v1.2		
VVB Assessment		Date: 15/08/2023
Closed. The indicators 3.9, 11.7, and 17.17 were removed.		
Project Participate Response		Date: 17/08/2023
OBS: The PD template requires that complete and accurate information be provided in PD Section 1.17. PD Section 1.17 was updated to state that evidence of contribution to SDG 13 can be found in Section 5.3, not 6.3. This addresses the observation by providing a correct section reference for where this evidence can be found.		
Documentation provided by the Project Participant		
FCW Project Description v1.3		

CL ID	05	Date: 31/07/2023
Description of the CL		
Section PD 1.18: Please, improve the description and list the information considered "Commercially Sensitive", according to the definition, and regarding the list of documents in Appendix C. Now it is stated "Public workbooks have accounting done within Excel and have VBA code omitted", omitted from who?		
Project Participant response		Date: 08/08/2023
VBA code references are now removed from this section, as this code is not omitted any longer. The section of the PD has been updated to describe that financial inputs into the NPV Additionality Calculations workbook and the workbook itself (Annex AH) will be excluded from documentation. Another piece of commercially sensitive information excluded from project documentation is the field		

data collection technology, provided only at validation and verification.	
Documentation provided by the Project participant	
- FCW Project Description v1.2 - Annex AH - Annex L	
VVB Assessment	Date: 15/08/2023
Not closed. - Annex U is not indicated in section 1.18 as commercially sensitive, however in Appendix C it is. - Please, refer to the definition of “commercially sensitive information” in Program Definitions v4.3 and VCS standard v4.4 (3.5.2 and 3.5.3) to justify its allowance. - OBS: Indicate Annex L in Appendix C as confidential, please.	
Project Participant response	18/8/2023
- Per the VCS Standard 3.5.2, commercially sensitive information may be protected from public review, particularly financial information per the VCS Program Definitions v4.3. Annex U has been added to Section 1.18 due to its sensitive financial nature as evidence in the Non-Permanence Risk Report. - Per the definitions in VCS Program Definitions v4.3, financial information may be omitted, per the definition of “sensitive information:” if its disclosure “...could reasonably be expected to result in a material financial loss or gain, prejudice the outcome of contractual or other negotiations or otherwise damage or enrich the person or entity to which the information relates”. Justification for how this applies to both Annex AH and Annex U has been included in Section 1.18 of the PD. - Appendix C now does not list Annex L as confidential, as this is intended to be public information, and reference to this Annex has been removed from Section 1.18.	
Documentation provided by the Project Participant	
FCW Project Description v1.3	
VVB Assessment	Date: 29/08/2023
Closed. Requested attended.	

CL ID	06	Date: 31/07/2023
Description of the CL		
Section PD 2.4: Please, provide evidence of the comments received (and its response) during the public comments period in Verra Registry (13/05/2023 to 12/06/2023), or the absence of comments (mail from Verra).		
Project Participant response		Date: 08/08/2023
Annex AQ submitted as pdf of the email from Verra stating no public comments were received. Annex reference has been added to Section 2.4 of PD.		
Documentation provided by the Project participant		
- FCW Project Description v1.2 - Annex AQ - No Public Comments Evidence from Verra.pdf		

VVB Assessment	Date: 15/08/2023
Closed. Evidence was provided.	

CL ID	07	Date: 31/07/2023
Description of the CL		
Section PD 3.5: 1- "Current stumpage prices for pulp and sawlogs were provided by the Fritch Mill in Snohomish, WA". Provide a rationale in the text of the accuracy and independency of this assumption. 2- OBS: In 'Sub-step 1a: Define alternatives to the project activity' the narrative is messy (please, state clearer each scenario). 3- OBS. Table 13, please, provide a title and refer to the Annex AH. Statement 'Workbooks with all financial calculations shall be provided at verification' does not proceed, since additionality is assessed during validations.		
Project Participant response		Date: 08/08/2023
1 – Text added to this section that describes how this mill is the closest mill to the PAI and likely would have been used during a commercial harvest in absence of the project activity. A link to the current stumpage prices from this mill is also included, with the caveat that prices may have changed since the time of writing. 2 – Sub-step 1a has been edited for clarity, such that one scenario is described: the project scenario in absence of financial benefit from the project activity 3 – Text now added to refer reader to Annex AH for details of the calculations of these values included in this table		
Documentation provided by the Project participant		
FCW Project Description v1.2		
VVB Assessment		Date: 15/08/2023
1- Closed. A rationale has been included in the text. 2- Closed. Word added to clarify. 3- Closed. Word added to clarify.		
Project Participate Response		Date: 17/08/2023
1 – The link was added for public prices website.		
Documentation provided by the Project participant		
FCW Project Description v1.3		

CL ID	08	Date: 31/07/2023
Description of the CL		
Section PD 4.1: 1- "The supersection, as defined in Annex BL". There is no Annex BL. If it mean Annex AF (California Air		

Resource' Forest Protocol) it is not provided neither in the Annexes sent.	
2- "Default lying dead wood biomass values that were used for each PAI are provided below:". There is no info provided for PAI 1024.	
3- Please, review the numbers of the equations in PD related to MLF (regarding the numbering in VM0003).	
4- CFDW Carbon fraction of dry matter in dead wood (t C t ⁻¹ d.m.). The value used is not indicated in the PD when equation 25 is mentioned.	
Project Participant response	Date: 08/08/2023
1- Annex reference was updated from Annex BL to Annex AF, the California Air Resources Forest Protocol and CARB Assessment Area Data File. Annex AF was updated to match the Annex Resource Name Reference. This resolves the clarification by providing a correct annex reference in PD Section 4.1 and providing the reference documents in Annex AF. 2- A figure was added to PD Section 4.1 showing CARB Supersection, CARB Forest Type, FIA Forest Type, and Lying Dead Biomass (tons/ac) for PAI 1024. This provides clarification by adding the requested information to PD Section 4.1. 3- Equation numbers in PD Section 4.1 were updated to reflect those in VM0003 Methodology v1.3. This addresses the clarification requirement by ensuring that the numbering of the equations listed in the PD aligns with the numbering in the most recent version of the methodology. 4- The CFDW value used (0.5) was added in the definition table for Equation 25. This provides clarification by supplying the value used for CFDW.	
Documentation provided by the Project participant	
• FCW Project Description v1.2 • Annex AF	
VWB Assessment	Date: 15/08/2023
1- Closed. Reference to Annex corrected and Annex provided. 2- Closed. Default lying dead wood biomass value included for PAI 1024. 3- Closed. Reference to equations numbers was corrected. 4- Closed. Correct value provided in the text.	

CL ID	09	Date: 31/07/2023
Description of the CL		
Section PD 4.2: “Dead wood carbon and harvested wood carbon pools within the project will be calculated in the same manner as the baseline”. Please, clarify in the text if the ex-ante emissions of the project scenario did not consider harvesting and then wood products were not included. Note than in general terms, since verification is not included, the assumptions regarding the project scenario in the ex-ante calculations have to be clear (in all chapter 4 of the PD), please review section 4 in this terms.		
Project Participant response		Date: 08/08/2023
Section 4.2 describes the procedure for quantification of project emissions/removals in accordance with the methodology. No wood products equations are present in section 4.2 because no harvesting or wood products are assumed in the project scenario. Section 4.2 now states that no harvesting or harvested wood products are included in the project scenario for the ex-ante model.		

Documentation provided by the Project participant	
FCW Project Description v1.2	
VVB Assessment	Date: 15/08/2023
Closed. Clarification regarding no harvesting (and then no wood products) in the ex-ante project scenario is provided now in the text.	

CL ID	10	Date: 31/07/2023
Description of the CL		
Section PD 5.1: - Parameter ABSL, i. Unit is hectare. - Please, split ABSL,i and BEF in two tables - Parameter DDW, indicate the Annex or the complete bibliography reference. - Parameter Dj is missing. R. Source of data is not consistent (Source of data different to Value applied). Section PD 5.2: - Ap. Source of data is not correct, section 5.4 does not exist. Please, provide the Monitoring Protocol and reference to it in the text. - Dn,i,t should be DMn,i,t according to VM0003 v1.3. - DMn,i,t; DBH; H, L, N. It is stated "Further description of measurement methods can be found in section 5.3", However there is no information in this regard in section PD 5.3 o mention and explanation of the external reference (Monitoring Protocol). - In some parameter, in section 'Description of measurement methods and procedures to be applied' the person/entity responsible for the measurement is missing, as the template request.		
Project Participant response		Date: 08/08/2023
- The units associated with the ABSL, i parameter have been changed to hectares. - Data / Parameter tables associated with ABSL, i and BEF are now displayed individually. - The source materials related to the DDW parameter have been updated in the noted annex (Annex M). - A table listing information related to parameter Dj has now been included. - The source of data for parameter R is now consistently listed and also provided in the updated Annex O. - The source of data for parameter R has been updated to reference the correct section in the PD. According to the PD template (vcs-project-description-template-v4.2-final) a Monitoring Protocol is not required in section 5.2. - The parameter associated with the diameter of dead wood (DMn,i,t) has been updated to contain the correct notation. - Clarifications have been added to parameter tables associated with DMn,i,t, DBH, H, L, and N regarding the locations of additional information. Per the PD template, a Monitoring Protocol is not required in section 5.2. - All parameter tables in section 5.2 now contain information related to the person / entity responsible for monitoring and measurement in the "Description of measurement methods and procedures to be applied" field.		

Documentation provided by the Project participant	
• FCW Project Description v1.2 • Annex M • Annex O • Annex AX	
VB Assessment	Date: 15/08/2023
1-9. Closed. Requirements attended.	