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Validation and Verification Report

ACR783 NativState – S&J Taylor Forest Carbon Improved Forest Management Project

March 5, 2024

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1 INTRODUCTION

NativState, LLC (NativState), contracted with Ruby Canyon Environmental, Inc. (RCE) to perform the validation and verification of the ACR783 NativState – S&J Taylor Forest Carbon Improved Forest Management Project (Project) for the reporting period of June 8, 2022 – June 7, 2023 and a crediting period of June 8th, 2022 – June 7th, 2042 under the American Carbon Registry (ACR) program. RCE was acquired by TÜV SÜD America, Inc. (TÜV SÜD) in 2023. RCE will be used throughout this report. NativState acts as the project developer for the landowner and project proponent S&J Taylor Family, LLLP. (S&J). This report is documentation of validation and verification activities that RCE performed for the Project. For the validation, RCE reviewed the project information as described in the GHG Project Plan "NativState – S&J Taylor Forest Carbon Improved Forest Management Project" dated March 4, 2024. For the verification, RCE ensured that the GHG assertion was materially correct, that the data provided to RCE was well documented, and that if NativState made any material errors, that these errors were corrected. RCE worked with Forest Resource Solutions and Technologies (FRST) to complete this validation and verification.

1.1 OBJECTIVES

The objectives of the validation are to evaluate:

- Conformance to the ACR standard and the approved ACR Methodology for Improved Forest Management (Methodology).
- GHG emissions reduction project planning information and documentation in accordance with the applicable ACR-approved methodology, including the project description, baseline, eligibility criteria, monitoring and reporting procedures, and quality assurance/quality control (QA/QC) procedures.
- Reported GHG baseline, ex ante estimated project emissions and emissions reductions/removal enhancements, leakage assessment, and impermanence risk assessment and mitigation (if applicable).

The objectives of the verification are to evaluate:

- The emissions reductions and to ensure that the assertion is materially correct;
- The data provided to RCE can be documented and if errors or omissions are detected, they be corrected.

RCE retains all data and documents for seven years after the end of the project reporting period or for the duration required by ACR, whichever is longer.

1.2 PROJECT BACKGROUND

The Project is located on approximately 17,216 acres of oak, gum cypress riparian forests in south central Arkansas. This property is owned by S&J. The Project ensures long-term sustainable management of the forests.

1.3 Responsible Party

Project Proponent

S&J Taylor Family, LLLP.
140 Grant County Rd. 167077
Sheridan, Arkansas, 72150
Trayvis Todd, Regional Director

Project Developer

NativState, LLC
1510 Mill Street
Conway, AR 72034
Alex Claypool, Vice President

1.4 Validation and Verification Team

Lead Validator and Verifier: Zach Eyler
Biometrician: Andrea Eggleton, FRST
Professional Forester: Christian Eggleton, FRST
Forest Carbon Projects Manager: Tim Facemire, FRST
Team Member: Andrew Russo, FRST
Internal Reviewer: Bonny Crews

1.5 Validation and Verification Criteria

1.5.1 Validation and Verification Standards, Guidelines, and Tools

- ACR Standard, Version 7.0 (December, 2020)
- ACR Validation and Verification Standard Version 1.1 (May, 2018)
- Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non‐Federal U.S. Forestlands v.2.0, July 2022
- ACR Tool for Risk Analysis and Buffer Determination, v1.0
- ISO 14064-3:2019 "Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions"

1.5.2 Level of Assurance

The verification was conducted to a reasonable level of assurance.

1.5.3 Materiality

The verification was conducted to ACR's required materiality threshold of +/-5% of the GHG project's emissions reductions or removal enhancements.

2 VALIDATION AND VERIFICATION PROCESS

As the first step in validation/verification activities, the Lead Validator/Verifier developed a Validation/Verification Plan to be followed throughout the validation and verification. The plan included the following activities:

- RCE completed a COI form for the validation on February 3, 2023 to identify any potential conflict of interest with the Project or Project Developer. The COI form was approved by ACR on February 6, 2023. RCE also submitted a COI form for the verification on June 16, 2023.
- RCE and NativState held a validation kick-off meeting on February 7, 2023. During the kick-off meeting RCE reviewed the validation objectives and process, reviewed the schedule, and submitted an initial document request.
- RCE and NativState held a verification kick-off meeting on June 22nd, 2023. During the kick-off meeting RCE reviewed the verification objectives and process, reviewed the schedule, and discussed data/document requests.
- RCE performed a strategic review and risk assessment of the received data and support documents to understand the scope and areas of potential risk in the GHG emissions reductions.
- RCE developed a risk-based sampling plan based upon the strategic review and risk assessment. The validation/verification plan and sampling plan were used throughout the process and were revised as needed based upon additional risk assessments.
- The validation/verification team conducted the site visit to the Project to verify the inventory quality and forest management practices from June 26-29, 2023. During the site visit the Verification Team performed key personnel interviews, conducted sequential sampling of inventory plots, conducted reconnaissance of the Project area boundary, observed elements of natural forest management, and observed harvest locations (if applicable) during and preceding the reporting period.
    - The site visit was attended by the following verification team personnel:
        - FRST:
            - Tim Facemire
            - Noam Knopf-Boyer
    - During the site visit, the Verification team met with the following individuals:
        - NativState
            - Tim White
            - Robby Buffington
            - Trey Franks
            - Robert Stainton
            - Maddie Beason
- RCE performed a risk-based desktop review of the submitted validation/verification documents. The desktop review included an assessment of the GHG calculation methods and inputs, source data completeness, data management system and monitoring systems and eligibility documentation.
- RCE conducted interviews and had conversations with Project personnel during the verification. Personnel interviewed include:
    - Anil Koirala – NativState

    - Surya Adhikari – NativState
    - Robert Stainton - NativState
- RCE submitted requests for corrective actions, non-material findings, additional documentation, and clarifications as necessary to NativState throughout the validation/verification.
- RCE's internal reviewer conducted a review of the validation/verification sampling, report, and statement.
- RCE issued a final validation/verification report, verification statement, and List of Findings.
- RCE held an exit meeting 12/20/2023 with NativState.

3 VALIDATION AND VERIFICATION FINDINGS

3.1 PROJECT BOUNDARY AND ACTIVITIES

The Project entails improved forest management on approximately 17,216 acres of oak, gum, and cypress forests in south central Arkansas GHG emission reductions for the Project are quantified by comparing actual onsite carbon stocks against modeled baseline onsite carbon stocks and baseline carbon in harvested wood products. The difference in these Project and baseline carbon stocks year over year is the basis for calculating the Project's primary goal of maintaining and enhancing forest GHG pools.

The Project's temporal boundary is the crediting period from June 8, 2022 – June 7, 2042.

3.2 GHG SOURCES SINKS, AND RESERVOIRS

Table 1 shows the GHG emission sources included in the project boundary based on the Methodology. RCE confirmed that the GHG Project Plan appropriately identifies the offset project boundary and includes all relevant SSRs.

Table 1. GHG Emissions Sources

Source	GHG	Description
Above-ground biomass	CO_2	Major carbon pool for project activity
Below-ground biomass	CO_2	Major carbon pool for project activity
Harvest wood products	CO_2	Major carbon pool for project activity
Market Effects	CO_2	Reductions in project outputs due to project activity may be compensated by other entities in the marketplace. Those emissions must be included in the quantification of project benefits.

3.3 ELIGIBILITY

3.3.1 ACR Eligibility

RCE confirmed the following ACR eligibility criteria listed in the ACR Standard, Version 7.0 by reviewing the project proponent's GHG Project Plan, Monitoring Report, and calculations as well as other supporting documentation described throughout this report (a full list of documents reviewed is in Appendix A).

- Start Date: The project start date is June 8, 2022.

- Minimum Project Term: The minimum project term is 40 years.
- Crediting Period: The crediting period is 20 years as specified by the Methodology, June 8, 2022 – June 7, 2042.
- Real: RCE confirmed that the GHG reductions follow the ACR methodology and are verifiable.
- Emission or Removal Origin: RCE confirmed that S&J owns and has control over or documented effective control over the GHG sources/sinks from which the emissions reductions or removals originate.
- Offset Title: RCE confirmed that all Project lands are owned directly by the Project Proponent (S&J), which holds full legal title.
- Additional: RCE confirmed that the project is additional as described in Section 3.4.
- Regulatory Compliance: RCE confirmed that the Project was in compliance with all applicable regulations.
- Permanent: RCE confirmed that the Project correctly applied the ACR Tool for Risk Analysis and Buffer Determination to account for permanence. A total risk score of 18% was confirmed.
- Net of Leakage: RCE confirmed that the Project correctly accounted for leakage per the Methodology.
- Independently Validated and Verified: RCE is a third-party validation and verification body that the project proponent has contracted to validate and verify the Project.
- Environmental and Community Assessments: RCE reviewed project impacts as described in section 3.6 of this report.

3.3.2 Methodology Eligibility

RCE reviewed the Project against the ACR Methodology eligibility and applicability conditions and confirmed the following:

- The Project is located on non-federally owned private forestland.
- S&J controls the timber rights on the forestland and can legally harvest.
- The Project property and all associated harvest activity falls under the ATFS (American Tree Farm System).
- The Project is not on tribal lands.
- The Project is not on public non-federal lands.
- The Project does not use non-native species where adequately stocked native stands were converted for forestry or other land uses after 1997.
- The Project has not drained or flooded wetlands on or after the project start date.
- S&J owns all lands and timber rights on the Project area.
- The Project's stocking levels will increase well above the baseline conditions for the duration of the Project and by the end of the Crediting Period.

3.4 ADDITIONALITY

The Project meets the requirements for the demonstration of additionality specified by the ACR Standard and the Methodology.

3.4.1 Regulatory Surplus Test

RCE confirmed that there are no existing laws, regulations, statutes, legal rulings, or other regulatory frameworks in effect as of the start date that requires the Project activity and the associated GHG emissions reductions; thus, the Project passes the regulatory surplus test.

3.4.2 Common Practice Test

The Project area is similar to surrounding private forestland that is regularly harvested as it reaches viable diameter thresholds and has a history of some timber harvesting.

The project's geographic region for timber production extends in all directions. Throughout this region private forestland is heavily cut, often through shelterwood, single tree selection and clear-cutting, and is managed to maximize NPV of the asset. Wood products including hardwood, sawtimber and softwood pulpwood are distributed to mills throughout this region and demand is strong and steady.

Without the carbon project commitment, the baseline harvest levels could also readily be realized due to increasing pressure in the area to convert forestland to residential development and agricultural lands. With Project implementation the forestland carbon stocks will exceed the common practice found in the region.

3.4.3 Implementation Barriers Test

The Project chose to assess the financial barriers test per the ACR Standard and Methodology. RCE confirmed that carbon funding is reasonably expected to incentivize the Project's implementation. Due to the Project being implemented, S&J loses the ability to monetize timber harvests at a rate similar to business-as-usual practices during the life of the Project. NativState provided a financial assessment comparison of NPV between the baseline scenario with harvesting and the project scenario with a lower amount of harvesting but including revenue from carbon credits. The baseline scenario NPV was significantly greater demonstrating that carbon funding is integral to the project activity.

3.5 Permanence

RCE confirmed that the Project correctly applied the ACR Tool for Risk Analysis and Buffer Determination to account for permanence. A total risk score of 18% was confirmed.

3.6 Environmental and Community Impacts

The GHG Project Plan includes a summary of the Project activity's net positive environmental and community impacts. The Project will provide habitat protection for wildlife, plant species, and trees, water quality protection and protection from soil erosion and degradation among other benefits. The Project is not expected to cause any negative environmental impacts.

3.7 Local Stakeholder Consultation

No formal stakeholder consultation occurred since the Project is held on private lands.

3.8 Monitoring Plan

The GHG Project Plan includes a Monitoring Plan that identifies all monitored data and parameters. RCE confirmed that the monitoring parameters and approaches conform to the methods required by the Methodology. The plan includes all relevant data parameters and appropriately identifies units of measurements, data sources, methodologies, uncertainty, monitoring frequency and procedures, and QA/QC procedures. After discussions with NativState and reviews of project documents, RCE determined that the Monitoring Plan accurately reflects how Project data is monitored and recorded and there are no deviations relevant to the Project activity against the requirements of the Methodology. NativState and S&J implemented the monitoring plan as stated in the GHG Project Plan during Project activities.

3.9 Baseline Scenario

The Project's baseline scenario represents an aggressive harvest regime, targeted to maximize net present value at a 6% discount rate for industrial private lands. The baseline scenario applies harvesting across the Project area as allowed by the Methodology to maximize NPV.

The Project's baseline model simulates a range of harvest types and rotation lengths based on legal requirements and simulated growth within each stratum. The objective of modeling was to determine possible timber harvests in the project area over 100-years within the framework of legal and reasonable harvest constraints.

Stands were modeled for several different prescriptions, including no-harvest, clearcut, commercial thinning, and shelterwood removal, with restrictions on rotation ages, retention, and minimum harvest volumes.

NativState utilized the USDA's Forest Vegetation Simulator (FVS) Southern variant to model harvests and yields. Growth models were calibrated using site index values calculated from the USDA Web Soil Survey intersection with the project area. RCE reviewed the Site Index calculations and confirmed that a reasonable species and site index for the region was assigned on an individual plot basis to appropriately calibrate growth. The process was confirmed to be consistently and systematically applied to each plot.

RCE reviewed the resulting baseline outputs to ensure that they reflected the modeling objectives and the legal additionality requirements. The model grows trees and volumes at a reasonable rate compared to regional averages.

3.10 On-site Inventory Verification Check

In preparation for and during the site visits, the Verification Team reviewed evidence necessary to verify Project inventory estimates.

The Project inventory consists of seven forested strata which FRST sampled using a random sampling method.

The current inventory contains 625 permanent, fixed-radius plots. At each plot location, trees were measured in two nested plots: a larger 1/20th acre plot with radius of 26.33 feet, and a smaller 1/100th acre plot with radius of 11.78 feet. The larger plot measured all living trees greater than or equal to 5 inches DBH while the smaller, nested plot measured all living trees between 1-4.9 inches.

Given this sample design and Project size, the Verification Team was required to achieve a minimum of 25 successful plots within the project to successfully verify inventory stocking levels. The Verification Team successfully verified site data after measuring a total of 25 site plots. The Project passed the t-test during the site visit.

Project Area

During the site visit, the Verification Team conducted boundary-line reconnaissance by visiting Project boundary edge lines and points, plotting edge points with GPS receivers, and determining whether there were discrepancies with the digital Project boundary files provided by NativState and the physical boundary witnessed on-site. This was done to determine the risk that Project area inaccuracies could contribute to a material misstatement in Project emission reductions. To the extent feasible, the Verification Team confirmed that the Project area boundary was appropriate and accurate.

3.11 Project Data and GHG Emissions Reduction Assertion

RCE reviewed the GHG Project Plan and Project data and calculations to ensure that appropriate equations were used in calculating baseline emissions, project emissions, and net emissions reductions.

3.11.1 Baseline Emissions

RCE and FRST confirmed that the baseline emissions were correctly calculated. Baseline emissions were calculated by reviewing input and output files for every FVS baseline modeling prescription, including forest codes, diameter breaks, merchantability thresholds, rotation lengths, regen/spouting, FVS harvest triggers on individual plots, site indices, treelists, and plotlists modeled over 100 years. The output workbook (ERT_Calculator) was then independently recreated in the data checks confirming proper calculation of assigned plot level outputs allocated to prescription based independently confirmed SMZ constrained and unconstrained acres. These values were then compiled into yearly baseline values for live as reflected in the ERT monitoring calculation sheet. A secondary output of this process was the 100-years of modeled harvesting based off Best Management Practices (BMP) constrained acreages which was then run through the prescribed harvested wood product calculations customized for the project region(s). These calculations were made on 40-year time intervals as well as 100-year intervals and they were appropriately incorporated into the ERT monitoring calc sheet. See additional information relevant information in section 3.9.

3.11.2 Project Emissions

RCE and FRST confirmed that the project emissions were correctly calculated. The methods to confirm project emissions follow what is described in section 3.11.1 above.

3.11.3 Emissions Reductions

RCE verified that NativState calculated emission reductions according to relevant Methodology equations and that the methods are included in the GHG Project Plan.

RCE recalculated emission reductions for the first reporting period according to the equations defined in the Methodology and the GHG Project Plan and found the Project assertion to be free of material misstatement.

RCE and FRST also recalculated and confirmed the uncertainty assessment for the Project. The uncertainty calculation is the compiled square roots of the summed errors of the strata using a 90% confidence interval. RCE and FRST confirmed that the live, and total uncertainty for the reporting period onsite carbon stocks was accurate.

4 VALIDATION AND VERIFICATION RESULTS

RCE developed a combined List of Findings for both the validation and verification. The List of Findings noted all corrective action requests (CARs), non-material findings (NMs), additional documentation requests (ADRs), and clarification requests (CRs). NativState appropriately responded to all items in the List of Findings. The List of Findings is provided as Appendix B.

5 VALIDATION AND VERIFICATION CONCLUSION

RCE conducted a risk-based analysis of NativState – S&J Taylor Forest Carbon Improved Forest Management Project GHG assertion including a strategic review of the Project data and evidence. Based upon the processes and procedures and the evidence collected, RCE concludes that the Project emission reductions during the reporting period June 8, 2022 through June 7, 2023 can be considered:

- GHG-related activity: improved forest management of forest land on the Project area
- GHG statement: 6/8/2022 – 6/7/2023
- Criteria
    - In conformance with ACR's Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non‐Federal U.S. Forestlands v.2.0, July 2022 and ISO 14064-3:2019 standards,
    - Without material discrepancy, and
    - Verified to a reasonable level of assurance.

The data and information supporting the GHG statement were historical in nature.

RCE has ensured NativState's effective use of controls related to the GHG statement. RCE concludes that there is sufficient and appropriate evidence to support NativState's GHG statement and is issuing an Unmodified Opinion.

RCE confirms that the GHG statement has been prepared:

- Without material discrepancy,
- In accordance with all applicable criteria, and
- Verified to a reasonable level of assurance.

The verified emission reductions are listed in Table 2. While RCE confirmed the emission reduction

calculations and the total emission reductions to be correct and within the materiality threshold, the values in Table 2 are summary data only with significant figures rounded for summary purposes in this report.

Table 2. Total ERTs

Vintage	Removal ERTs ($mtCO_2e$)	Other ERTs ($mtCO_2e$)	Total GHG Reductions and Removals ($mtCO_2e$)		Risk Buffer ($mtCO_2e$)	Final ERTs ($mtCO_2e$)
2022	3,387	410,130	413,517		74,433	339,084
2023	2,585	313,047	315,632		56,814	258,818
Total	**5,972**	**723,177**	**729,149**		**131,247**	**597,902**

Note: Totals might not sum due to rounding.

Lead Validator and Verifier

Zach Eyler

Internal Reviewer

Bonny Crews

APPENDIX A—DOCUMENTS REVIEWED

1. 148 deed files with the ###-### code.
2. AC 1 Base (Use)_FVSoutput
3. AC 1 Base SMZ (Use)_FVSoutput
4. AC 1 IFM 1% 5% (Use)_FVSoutput
5. AC 1 SMZ IFM 1% 5% (Use)_FVSoutput
6. AC 2 Base_FVSoutput
7. AC 2 IFM_FVSoutput
8. AC 2 SMZ Base_FVSoutput
9. AC 2 SMZ IFM_FVSoutput
10. AC 3 Base_FVSoutput
11. AC 3 IFM_FVSoutput
12. AC 3 SMZ Base_FVSoutput
13. AC 3 SMZ IFM_FVSoutput
14. ACR 783_Plot CO2e RP 1_series
15. ACR 783_Plot CO2e_series
16. ACR AFOLU Carbon Project Reversal Risk Mitigation Agreement V7 Apr 2021 FINAL (002)_to be signed
17. ACR783_MonitoringReport_series
18. ACR783_S&JTaylorFCP_FinalDraft_series
19. ACR783_S&JTaylorFCP_GHG_Project_Plan_FinalDraft series
20. ACR783_ERT_Calculator_Final
21. NS_ACR783_GHG_Project_Plan_Final
22. NS_ACR783_MonitoringReport_Final
23. ACR783_S&JTaylorFCP_MapPackage_series
24. ATFS 9332-C and 9332-D
25. ATFS_AR-9705_Deer Creek Tract_Bug Spot Harvest_5.48acres
26. ATFS_AR-9705-AE_Huntley Trail Tract_Harvest_39.09acres
27. ATFS_AR-9705-R_Hale Tract_20of29.25acres
28. ATFS-9705AF Lee Cemetary plots 645 and 646
29. HW Base_FVSoutput
30. HW IFM_FVSoutput
31. HW SMZ Base_FVSoutput
32. HW SMZ IFM_FVSoutput
33. NativeState Timber Inventory SOP
34. NS_ACR783_GHG_Project_Plan_Final
35. NS_ACR783_MonitoringReport_Final
36. Plot Layout Algorithm information
37. S&J Taylor table with Vesting Deeds series
38. S&J_Taylor_Harvests_series
39. S&JTaylorFCP_Check_Cruise2_Data_2023-1-24-13-0-38
40. S&JTaylorFCP_MillCapacity
41. ST AC 4 Base_FVSoutput

42. ST AC 4 IFM_FVSoutput
43. ST AC 4 SMZ Base_FVSoutput
44. ST AC 4 SMZ IFM_FVSoutput
45. ST HW Base_FVSoutput
46. ST HW IFM_FVSoutput
47. ST HW SMZ Base_FVSoutput
48. ST HW SMZ IFM_FVSoutput
49. ST_FVS_database_2023_4_22_Clean
50. Taylor_fully_executed_agreement
51. Taylor_PineRegen_FVS_database_2022_11_17_10_44_21
52. TI AC4 Base_FVSoutput
53. TI AC4 IFM_FVSoutput
54. TI_FVS_database_2023_4_22_Clean
55. Timber Investments Table with vesting deeds
56. TM_S_timber_price_report
57. wss_aoi_2023-08-18_08-57-21
58. Appendix B – NS_ACR783+SDG-cont-Report
59. NS_ACR783_GHG_Project_Plan_Final_03042024

APPENDIX B—LIST OF FINDINGS

Includes Corrective Action Requests (CAR), Non-Material Findings (NMs), Additional Documentation Requests (ADR), and Clarification Requests (CR), as necessary.

Corrective Action Request (CAR), Non-Material Finding (NMF), Additional Documentation Request (ADR), or Clarification Request (CR) #	Finding and Date	Section of Protocol/ Methodology or Program Document	Project Developer Response and Date	RCE response and Date	Additional Project Developer Response and Date	Additional RCE Response and Date	Additional Project Developer Response and Date	Additional RCE Response and Date	Additional Project Developer Response and Date	Additional RCE Response and Date
CAR 1	Upon review of the 'Plot Layout Algorithm information' document and discussion with the registry, more information on the plot layout algorithm method is needed. In particular, additional information is needed related to the iterative process mentioned in step 5, and the decision making/judgment calls made on an 'acceptable' distribution of plots. Clarification confirming that the installed plots are distributed such that all project acres had an equal probability of being sampled, such that each plot is representative of a consistent number of acres in the project. There are also concerns related to the exclusion of areas adjacent to boundaries as potential plot locations as there are none, particularly considering that the inventory procedures lack guidance on plot boundary procedures entirely, i.e. the 'Walkthrough', 'Mirror', or modified TPA method. Extensive analysis justifying this method is needed. A series of screengrabs has been provided on the tab titled 'CAR 1'.	4.2.2	8/29/23 - With regards to the areas in question as presented in tab "CAR 1"...Plots in these areas were originally laid out as 1 plot per 10 acres (versus 1 plot per 30 acres as done on the rest of the parcels) as shown on screengrabs added to CAR 1. As plot density needs to be consist across all strata, two thirds of the plots needed to be removed. To do this in an unbiased manner, we removed all plot numbers that weren't evenly divisible by 3. As a result, the plot pattern distribution does not reflect a rectangular or diamond shape grid. Plots were laid out using forest inventory management/data collection software titled Inventory Manager. In Inventory Manager, only plot pattern and density were only variables selected before laying out plots. IM then equally distributes plots (using prescribed plot density) across the selected parcel(s). Original plot distributions (before removing 2/3 of plots, removed plots in grey) for tracts in question are attached to tab 'CAR 1'. Inventory procedures have been updated to reflect the use of the walkthrough method which was used on plots that fell on/near a boundary line. Updated SOPs can be found in the Forest Inventory SOPS folder.	Thank you for the clarification. Please memorialize this information including the screen captures into project documentation. ACR has flagged this issue as something to review in-depth upon registry review.	Included in 'Appendix A - Inventory Plot Layout' with LoF 6.0 response.	Thank you for providing this document. The registry will make the final call on the acceptability of this method, therefore this item may be closed.				
CAR 2	In the 'BaselineFVS' and 'IFMFVS' tabs of 'ACR783_S&JTaylorFCP_FinalDraft_042823' the data used in baseline and project models only appears to include 'Belowground Dead' (col.G) but no Aboveground Dead. Per section 1.4, in relation to aboveground dead, 'where included, belowground standing dead wood must also be included' and for belowground dead, 'where included aboveground standing dead wood must also be included' and for both, 'the pool must be estimated in both the baseline and with-project scenarios'. Standing dead was excluded from the inventory and subsequently in the GHG Plan, 'standing dead wood is rather ephemeral in southern forests, the optional carbon pool of standing dead wood was not measured and has been excluded from biomass calculations.' The inclusion/exclusion of dead carbon stocks must be consistent across the entire quantification and model.	1.4	8/29/23 - Belowground Dead was not used in any calculations. It was shown simply as a byproduct of copying table information from FVS. Belowground dead data has been removed from both the "BaselineFVS" and "IFMFVS" tabs resulting in zero values for all deadwood values in the "Baseline" and "IFM" calculation tabs. Updates are shown in the new ERT calculator dated 08122023 located in the Quantification folder.	Thank you for making this change, it has been confirmed. This item may be closed.						
CAR 3	Questions about baseline/project prescriptions persist after review of the .out files: Arkansas BMPs state SMZs may be cut to a residual BA of 50. In 'AC 2 SMZ Base' .out file, the third prescription in the sequence reads as: ThinDBH, 100% cut all size and species with a residual BA of 50. This prescription is not hitting this target. The same issue is occurring in the 'AC 3 SMZ Base', 'ST AC 4 SMZ Base' .out files. Screen captures showing each case is included in the 'CAR 3' tab. Please correct the modeling keywords to meet the BMPs and the affirmations stated in the GHG Plan.	4.1	9/15/23 - Prescriptions have been updated to reflect a residual 50 BA. Materials and models updated.	Thank you for making this change, it has been confirmed. This item may be closed.						
CAR 4	Defect quantification is incorrect in the documents 'ACR783_ProjectDates_CO2e_083123' and 'ACR783_ERT_Calculator_083123'. In the 'ST_DefectCalc' and the 'TI_DefectCalc' tabs of the 'ACR783_ERT_Calculator_083123' workbook, tree level deductions are being calculated in column Z. The method by which defect is calculated is sound and has been replicated by the verifier. The problem is that each tree is not being represented on a per acre basis, i.e. each inventoried defected tree is representative of 20 defected trees (as only large trees have defect, or a TPA of 20) and that defect must carry through on all 20 iterations. These compiled plot defect values (col. AB) are being brought into the 'Baseline' tab col. M and are erroneously labeled 'Defect Deduction (mt C/**ac**)', as well as the 'Plot_Defect_Calc' tab of 'ACR783_ProjectDates_CO2e_083123'. This issue is causing plot level defect reductions to be underestimated by a factor of 20 in onsite, baseline, and project modeling and must be corrected.	4.1	9/19/23 - The defect quantification is now adjusted to reflect the per acre values. The change has been made in both CO2 file and ERT files.	Thank you for making this change, it has been confirmed. This item may be closed.						
CAR 5	In the 'Uncertainty' tab of 'ACR783_ERT_Calculator_083123' the values captured in the uncertainty table in cells D10:X10 add up to 658 samples (plots). Uncertainty statistics need to be based on actual onsite stocking of the 625 verified plots.	4.4	9/15/23 - Plots and calculations have been updated to reflect actual plots.	Thank you for making this change, it has been confirmed. This item may be closed.						
CAR 6	Upon review of the 'Select_Cut ERT Calc' tab of 'ACR783_ERT_Calculator_091923' the values used to represent EORP1 carbon, E33 has a value of 2323396. This value comes from cell Q12 of 'CO2e_RP1end' of 'ACR783_ProjectDates_CO2e_091923' and is calculated from the data stored in column F of the same tab. At this time, there are 7 harvested plots, 4 of which have inventoried carbon, 75, 671, 702, and 703, and none of which have been zeroed out for the actual calculated EORP1 stocks. A screenshot has been provided to illustrate this issue in tab 'CAR 6'.	4.1	9/29/23 - Thank you. This has been resolved in new CO2e file and the correct EORP1 value has been transferred to the ERT calculator.	Thank you for making this change, it has been confirmed. This item may be closed.						
CAR 7	Upon review of the 'Dates_CO2' tab in 'ACR783_ProjectDates_CO2e_091923' there is an error in the growth from start date to inventory date in column L. At this time, the equation is referencing a random locked in cell(K$45). A series of screenshots have been provided to clarify this issue. Please correct this error.	4.2	9/29/23 - Thanks for pointing this out. The new CO2e calc file has the appropriate correction.	Thank you for making this correction, it has been confirmed. This item may be closed.						

CAR 8	Upon review of the 'Baseline' and 'IFM' tabs of 'ACR783_ERT_Calculator_10032023_FinalDraft' the plot level defect recorded in column M is only being incorporated into initial (2022) stocks. Defect needs to be wholly incorporated into the model, including all years of carbon stocks, and harvested merchantable wood. In some instances, this also requires setting mathematical limits on stock sums as negative carbon does not exist after subtracting plot level defect.	4.1	10/30/23 - plot defect incorporated into all years of carbon stocks and harvested merch wood. Equations added to zero out if less than zero.	Thank you for the update it appears to have been properly applied on the 'IFM' tab, unfortunately, on the 'Baseline' tab of 'ACR783_ERT_Calculator_11102023' the equation applied in col. AI, BC, BW etc. is flawed. Every defect inquiry is based off of a single locked cell so therefore, no defect is being applied: =IF((BU618-**M26**)>=0,((BU618-**M26**)*3.664),0). Please correct this tab.	11/13/2023 - Corrected	Thank you for making this change, it has been confirmed. This item may be closed.				
CAR 9	Upon review of the 'Uncertainty' tab in 'ACR783_ERT_Calculator_10032023' there are multiple errors: The 'Carbon per acre plot' values captured in columns D,H,L,P,T,X, and AB are hard coded, and do not match the intended Start CO2e quantities. Per section 4.4, these quantities should be based off inventory data, not grown/degrown (Start CO2e) data, "For measured or modeled carbon stock estimates and wood products use the confidence interval of the input inventory data." In cells S27:S100, the X-Xavg values are erroneously subtracting the ST AC 3 mean, instead of the ST AC 4 mean. In cells W27:W106, the X-Xavg values are erroneously subtracting the ST AC 4 mean, instead of the ST HW mean. In cells AA27:AA53, the X-Xavg values are erroneously subtracting the ST AC 4 mean, instead of the TI AC 4 mean. In cells AE27:AE307, the X-Xavg values are erroneously subtracting the ST AC 4 mean, instead of the TI HW mean. In row 12, the values for strata level Variance are being calculated on the 'population' (divided by n), instead of on a 'sample' (divided by n-1). Statistically, these values are a representative sample of the forest and should be calculated as such, see tab 'CAR 9'. Please correct this tab.	4.4	10/31/23 - All values copied and pasted from Baseline tab column Aboveground Total Live (mt C/ac), rows D26:D650, as values (formulas blow up) into Uncertainty tab. Corrections have been added. Variance is now being calculated as a 'sample' instead of a population.	To clarify, uncertainty values are to be based off of total plot level (AG and BG) 'as inventoried' data including defect. The data from the 'Baseline' tab does not match the inventoried plot totals seen in the 'CO2e_InvDate' tab of 'ACR783_ProjectDates_CO2e_10312023'. Please correct this uncertainty tab to meet inventory data.	11/13/2023 - This has been corrected. The uncertainty values are now based off of total plot level (AG and BG) data including defect.	Thank you for making this change, it has been confirmed. This item may be closed.				
NMF 1										
NMF 2										
NMF 3										
ADR 1	The package 'ACR783_S&JTaylorFCP_MapPackage' does not have all the relevant data source files to open and manipulate by the verifier. Please provide a complete and comprehensive GIS package. A screenshot has been provided on tab 'ADR 1' to clarify the current status.	2.2	6/7/23 - Should be resolved	Thank you for providing this functioning map package. Items generated from analysis of this package will have distinct finding nomenclature. This item may be closed.						
ADR 2	Please include a shapefile of the harvest operation areas from the Initial reporting period.	5.3	6/7/23 - To be included in above referenced map package.	Thank you for providing this functioning map package. Items generated from analysis of this package will have distinct finding nomenclature. This item may be closed.						
ADR 3	Per section E.1 of the GHG Plan, please provide the soils database generated from the USDA NRCS Web Soil Survey used to calculate the site indices across the property.	4.2.1	8/29/23 - WSS database has been provided in Soil Site Index folder.	Thank you for this documentation, it has been confirmed. This item may be closed.						
ADR 4	In the grown to the end of reporting period calculations used for the site visit seen in 'ACR_783_ProjectDates_CO2e' please provide the daily/monthly growth allocation calculation, as well as the quantification method used, the verifier needs to be able to replicate these values.	7.3	8/11/23 - The file has been updated with all appropriate quantification formula and steps. The new file is located inside "Ruby Canyon External\Quantification" folder with file name 'ACR783_ProjectDates_CO2e_082923'	Thank you for this documentation, it has been confirmed. This item may be closed.						
ADR 5	Please provide the ATFS certificate/listing. At this time, the document provided states, 'Credentials to login to the American Tree Farm System database will be provided on request.'	1.3	8/29/23 - Login Information: www.atfsdatabase.org Username: ttodd Password: courtland1	Thank you for providing the particular certificates for the harvested areas, they have been confirmed. This item may be closed.						
ADR 6	Please provide the scale slips from the two harvests (Deer Run and Huntley Trail) recorded on property needed to support the value of 1,000 mt CO2e biomass as seen in cell B25 of the 'IFM_HWPs' tab of 'ACR783_S&JTaylorFCP_FinalDraft_042823'.	5.2	08/29/23 - The pdf file containing the list of harvests is provided in the "RP1_Harvest" folder. The Actual HWP calculations has been updated, which do not contain 1,000 mt CO2e value anymore. Please refer to our response for CR14.	Thank you for making these changes and updating the information. Upon review of the scale slip list, please correlate the tract names between the GIS and the scale slips. There appears to be a 'Mac Black Hill' tract, and an 'TFI - S&J Tie' harvest tract, neither of which match the expected harvest names. Please clarify.	9/18/23 - Mac Black Hill is part of the Deer Run tract (as labeled in GIS -5.48 acre Southern Pine Beetle/bug spot harvest). The R Hale is part of the TFI - S&J Tie tract (20 of 29.25 acre harvest). This area is mislabeled in GIS and has been corrected.	Thank you for the additional information, this item may be closed.				
ADR 7	Please provide the silvicultural prescriptions and dates of harvest for the two harvests that occurred within this reporting period.	5.2	8/29/23 - There were three harvests. Two originally reported and one additional. The first of the two was a 5.48 acre spot with a Southern Pine Beetle infestation. This area was harvested between 9/19 and 10/10/2022. The effected area and an associated buffer was removed. The second was a 44.57 acre harvest cut. This area was harvested between 10/6 and 11/4/2022. The third harvest, not previously reported, was 29.25 acres. This area was harvested between 11/21 and 11/30/22.	Thank you for the additional information, this item may be closed.						
ADR 8	Please provide the version of the Timber Mart south used in the NPV analysis.	2.4	8/29/23 - TimberMart prices from 6 Jan 2023	Thank you for the additional information, this item may be closed.						
ADR 9	Please provide/clarify what is the final ERT calc with the actual RP1 harvested wood, project start stocks, EORP1 onsite stocks, and finalized baseline and project models, for confirming final ERTs.	7.4.1	8/29/2023 - We updated the final ERT calc with updated HWPs, project start stocks and EORP1 onsite stocks. Please refer to the new ERT calculator file in the Quantification folder.	Thank you for making these changes, the file structure supporting these changes has been confirmed. This item may be closed.						
ADR 10	Please provide the '.out' files for the harvest prescriptions applied over the course of the baseline and project models so that these may be compared to the 'Management' tab descriptions for consistency.	4.2.1	8/29/23 - '.out' files for all model runs have been provided in FVS Model Inputs_Outputs folder	Thank you for the additional information, this item may be closed.						
ADR 11	Please provide the contact information of the ATFS inspector for this property.	1.3	8/29/23 - Trayvis Todd email: trayvist.forestryassociatess@gmail.com, Phone: (870) 917-5912	Thank you for providing this information, it has been confirmed. This item may be closed.						
ADR 12	Please provide a comprehensive plot list (of 625 plots, including all null and harvested plots) with their finalized strata and stocking, which represent project stocks at project start date, and end of RP1. At this time, the plot lists included in 'ACR783_ProjectDates_CO2e_083123' only include 567 plots.	5.3	9/19/23- The CO2 file now includes all plots including harvested and null plots.	Thank you for providing this document, this item may be closed.						

CR 1	In the 'ACR783_S&JTaylorFCP_GHG_Project_Plan_FinalDraft' document, section D.2 states there are 623 plots, but in 'ACR783_S&JTaylorFCP_FinalDraft_042823' there are 607 plots quantified in the 'IFM' tab. Please clarify.	7.3	6/8/23 - 16 recently harvested plots (TI HW RH and TI HW SMZ RH) left out of summed plots. Now included on both 'IFM' and 'Baseline' tabs.	Thank you for making this change. This item may be closed.						
CR 2	Upon review of the 3 treelist documents, 'TI_FVS_database_2023_4_22_Clean', 'Taylor_PineRegen_FVS_database_2022_11_17_10_44_21', and 'ST_FVS_Database_2023_4_22_Clean' there is no defect quantified. It is odd with 7434 inventoried trees that not a single stem has quantifiable defect. Please clarify/affirm that defect, when appropriate, was recorded in the field and incorporated into the quantification.	4.2.2	6/14/20 - Defects included. New tabs added to ACR783_S&JTaylorFCP_FinalDraft_042823 - ST_DefectCalc, ST_TreeDataClean, ST_TreeData, TI_DefectCalc, TI_TreeDataClean, TI_TreeData,Tree_Lookup. New column M, "Defect Deduction" added to Baseline and IFM tabs. Column O, "Net Live" now subtracts deduction.	Thank you for including this additional information.						
CR 3	Why haven't the dropped plots and their respective trees been removed from 'ST_FVS_Database_2023_4_22_Clean'? This includes plots 592, 581, 111, 623, 505, 638, 636, 653, 657.	7.3	6/8/23 - Double checked to insure plots should be removed from database. The plots had been deleted from the PlotInit but not the TreeInit. Now removed from TreeInit.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 4	There are 37 plots within the 'ST AC1' strata that lack any tree data as captured in 'ST_FVS_Database_2023_4_22_Clean', please clarify. The plot list can be found on the tab labeled "CR 4".	7.3	6/8/23 - All of these plots fell in pine areas that had recently been harvested and had no merchantable trees to measure at the time of inventory. These plots were assigned a zero carbon value. They will be measured and reported after the next inventory. Two additional plots (ST-42_645 & 646) were added to this list and are shown in CR 4.	Apologies for reopening this item, the trees on plots ST-42_645 & 646 were recorded in the inventory and should be included in both the inventory stats, as well as the Project Start Stats to set the Project level carbon for the AC4 strata. If they were harvested, then they subsequently should be zeroed out on the EORP1. This also applies to Plot 590 (AC4 strata).	10/31/23 - Done and corrected throughout.	Thank you for making this change, it has been confirmed. This item may be closed.				
CR 5	In the Baseline and IFM tabs of 'ACR783_S&JTaylorFCP_FinalDraft_042823' the total number of plots related to AC1 are being excluded, instead a flat value of '40' is being added to the total forested plot count. This appears to be directly related to CR 4. Please clarify.	4.2	6/8/23 - Please see above. Additionally, Plot ST-12_590 was found to be mislabeled as an AC1 plot. It should have been included with AC3. This brings the total plots in this stratum to 37+2-1=39 plots. Appropriate adjustments to be made throughout.	Upon review of the map package provided plot ST-12_590 intersects with AC1, not AC3. Please clarify.	8/31/23 - Correction on 6/8/23 was ...faulty. The following is true: Plot ST-12_590 is in AC 1 (not AC 3). Total plots in AC 1 = 43.	Thank you for making this change, it has been confirmed. This item may be closed.				
CR 6	In the 'ST_FVS_Database_2023_4_22_Clean', 'Taylor_PineRegen_FVS_database_2022_11_17_10_44_21' and 'TI_FVS_database_2023_4_22_Clean' databases there are plots that are in question. The first is plot 684. It is included in the ST database PlotList with ST-37 and there are three trees. It is also included in PineRegen database with the strata 8019j, with the exact same treelist. Is the PineRegen database a distinct model input separate from the ST? Please clarify. Accordingly, there is a plot 8019j_685 that doesn't have any trees. Does this plot exist, and which strata should it be incorporated into if it does? Next is 742. It is captured in the PlotList of ST-49, but there do not appear to be any trees. Does this plot exist, and is it null? Finally is plot 84. It is included in both PlotLists, one paired with ST-18 and the other TI-6, but there do not appear to be any trees in the ST version. Does this plot number exist in both strata, and is it null in the ST version?	7.3	6/8/23 - Plot 684 appropriately falls in the ST HW strata and includes 3 trees. Plot 685 had no measurable/merchantable trees and was modeled with the ST HW strata as a zero carbon plot. ST-37, was selected as a "dummy" stand for the Pine Regeneration model. Within the FVS model run the 3 trees were deleted and the Stand was "planted" (using Plant/Natural with Partial Estab Model) at 518 tpa and grown forward. There are several plots in the ST HW strata (including ST-49_742 and ST-18_84) that had no measurable/merchantable trees. This may have been because, for example, they fell in an undelineated creek bed or logging road. These plots were left in the inventory and run as zero carbon plots. TI-6_84 is a valid stocked plot.	Thank you for the clarification, it has been confirmed. This item may be closed.						
CR 7	Please clarify why the 'StandID' as defined in the SiteIndex_ForType_TI' tab of the 'ACR783_S&JTaylorFCP_FinalDraft_042823' calculation does not match the strata in the FVS_databases (601 and 161 vs. TI-X).	4.1	6/8/23 - The numbers (161, 601, 406, 709, etc.) represent FIA forest types. The forest types were used to sort plots into either a pine (ACX) or hardwood (HW) stratum. All 161s (loblolly plantation) were modeled in their appropriate age class. All other FIA forest types were lumped together and run as X HW)	Thank you for the clarification, consistency between documentation was the intention. This item may be closed.						
CR 8	Upon review of the provided map package, there are 625 'Operable' plots that intersect with 'Operable' lands. Per the 'Baseline' tab of 'ACR783_S&JTaylorFCP_FinalDraft_042823' there are 623 quantified plots. The discrepancies are listed here: Plot 252 in TI -6 that exist in the 'Baseline' tab and the rest of the 'ACR783_S&JTaylorFCP_FinalDraft_042823' workbook does not appear to exist within the provided map package. It is important to note, that wherever this plot is/was it was recorded as a 'null' plot. There is a parcel that has 3 plots, 708, 709, 710 in ST-AC 1, that does not appear to exist anywhere in 'ACR783_S&JTaylorFCP_FinalDraft_042823'. The GIS says these plot exist in operable lands, do they? A screenshot has been included in tab 'CR 8'. Are there 626 plots, which is the current list as seen in the workbook plus this parcel of 3? Are there 625 plots, which includes the parcel of 3, but missing TI-6_252 which matches the GIS? Are there 623 plots, which matches the quantified workbook? Or is there 622 plots, which doesn't have the parcel of 3, and excludes TI-6_252 since there is no GIS equivalent? Please clarify and update all calculations to reflect this finalized plot count.	4.2.2	8/29/23 - Plot TI-6 252 fell in a delineated road easement. It was removed from the inventory. The workbook (ACR783_S&JTaylorFCP_FinalDraft_042823) now reflects this change and corresponds to the map package. The updated map package can be found in the GIS folder. Plots ST-48 and 708-710 were zero carbon plots in ST AC 1. These plots were added to the workbook and now correspond with the map package. The total number of plots, as now reflected in both the workbook and map package, is 625.	Thank you for making these changes, they have been confirmed. This item may be closed.						
CR 9	Upon review of Sentinel 2 imagery, there is a ST Age Class 4 section of the property that has been harvested recently. It is located just west of Grapevine AR, screen grabs have been provided on the tab titled, 'CR 9'. Please clarify the dates of this harvest and the subsequent wood products.	5.3.1	8/29/23 - Additional data was requested and received for this harvest which occurred Nov-Dec of 2022. The harvest area as been added to the map package and calculations have been updated to reflect this harvest. Updated harvest data can be found in the RP1_Harvest folder.	Thank you for incorporating this harvest, this has been confirmed. This item may be closed.						
CR 10	In conjunction with ADR 3, how were the site index species chosen per plot from the WSS data, i.e. BA analysis per inventoried data, the soils rank, etc., and where is this work shown in the provided documentation.	4.2.1	8/29/23 - The site index was manually selected for each plot. The soils map (provided in ADR 3 was imported into GIS. Then each plot was inspected to determine soil group. Within each soil group, WSS has site index for several different species. The available species were reviewed and the species most commonly occurring in each plot was selected for site index. If no species were available, then a site index from an available species in an adjacent soil group was selected and ten feet was removed from the site index (to be conservative).	Thank you for the clarification, this item may be closed.						

CR 11	Upon review of 'NativState Timber Inventory SOP' QA/QC procedures and 'S&JTaylorFCP_Check_Cruise2_data_2023-1-24-13-0-38' there is a cruiser 'JDM' that only had 4 plots check cruised which contradicts the procedures, 'considered acceptable...for a group of five plots for that individual cruiser'. Please clarify. In reference to this cruiser, they have an average check score of 76.25 over these 4 plots, were there any steps taken for 'substandard work' for this cruiser, or any other cruiser, if so please provide this evidence.	4.2.2	8/29/23 - Only total number of check plots was considered in the SOPs without a certain number of plots for individual cruisers. Please see CR 12 for discussion of number of plots checked. The results and ways to improve were verbally discussed with this cruiser (and all cruisers after checks were performed); however, this cruiser is no longer collecting data for NativState.	Thank you for the clarification and confirmation, this item may be closed.						
CR 12	Please clarify the acceptability of a 5.6% (35/625) total plot check cruise sample, as well as only 2 days of 'check cruising', with all but 1 plot being completed on 1/24/2023.	4.2.2	8/29/23 - When considering number of check plots, the methodology was followed which requires number of check plots equal to the square root of the total number of plots. We considered this the minimum number of plots to be check cruised. As this was only 25 plots, 10 additional plots were checked.	For clarification, the methodology only speaks to the requirement to have an SOP which determines the QA/QC procedures and check cruising, not necessarily the amount of check cruising. The square root of the total plot count is specifically for field verification purposes. Inclusion of the chosen plot check cruise target (sqrt of total plots) into the SOP is an appropriate response to this item, and it has been confirmed. Therefore this item may be closed.						
CR 13	In comparison between 'Timber Investments Table with Vesting deeds' the 'S&J Taylor table with Vesting Deeds 2-16-23' and the Operable shapefile intersected with the publicly available 'BLM_PLSS' shapefile on AGOL, it appears there are entire sections that are neglected from inclusion in these two word documents. Please clarify. A tab titled 'CR 13' has been included with some examples, all of which are in the 'TI' strata.	1.2	8/29/2023 - The word documents with land descriptions were incomplete. A updated list has been provided in the Title folder. Parcels in question are on pages 10 & 11.	Thank you for providing this information. It has been confirmed, this item may be closed.						
CR 14	Upon review of the harvested wood products calculations for RP1, the values captured throughout the 'IFM' and 'IFM_HWPs' tabs of 'ACR783_S&JTaylorFCP_FinalDraft_042823' are all based off of project modeling, not actual harvested carbon as calculated in cell H83 of the 'IFM_HWPs' tab. There were two harvests included within the project area during the course of the first RP, please clarify why these harvests are not being quantified in the ERTs.	5.3.1	08/29/2023 - The actual RP1 HWPs are now based on the actual harvested carbon. Please refer to the "RP1_HW_Calc" tab of the ERT calculator file in the Quantification folder.	Thank you. Upon review of 'RP1_HWP_Calc' the values captured are all 'Green Tons' but they are being multiplied by an 'ACR Conversion Factor' of 31.5. Per 4.2.4 Step 1. I.B.i. 'If actual or baseline harvested wood volumes are reported in units **besides** cubic feet or **green weight**, convert to cubic feet using the following factors...'. As these values are being reported in green weight, why isn't Step 1. II of the guidance being followed? Please clarify.	9/19/23 - Thank you for pointing this out. We have added a column named as "Cubic Feet Volume" (Column O) before converting the volume to dry biomass.	I apologize, the previous finding was unclear. Since green weight is the quantified wood product there is no need to convert to cubic foot volume at all. The ACR conversion factor of 31.5 should not be used in this calculation, instead, Step 1. III should be followed, 'If a weight measurement is used [green tons], subtract water weight based on the moisture content of the wood. This results in pounds of biomass with zero moisture content.'"	9/29/23 - We agree. However, there is a certain formula to calculate the oven dry weight of wood using moisture content rather than just subtracting the water from the Green Tons. The formula is provided in the Wood Handbook (FPL-GTR-190) book from the USFS Forest Products Lab. The equation is provided in Chapter 4 of the book with equation no. 4-1. As mentioned in ACR IFM 2.0, we converted the Green Tons weight to oven dry lbs using above mentioned formula and then adjusted the oven dry lbs to accommodate the bark percentage. The new ERT calculator file has appropriate changes.	You are correct with this new method, and this is what the verifier had hoped you would implement. The only remaining issue is in relation to the 'Moisture Content (%)' sp. 299 value. At this time, species 299 has a moisture content of 71% per L6:L7 of the 'RP1_HWP_Calc' tab. This is the value of the Moisture Content of Bark, not Wood. A screenshot of the Miles and Smith paper has been provided. Please correct this constant.	10/30/23 - Thank you for pointing this out. The moisture content value for sp. 299 has been updated in the new ERT calculator.	Thank you for making this change, it has been confirmed. This item may be closed.
CR 15	Are there any easements, hunt clubs, mineral rights, or other restrictions that would limit management that have not already been addressed in the GHG plan? A hunt club and camp was observed during the site visit.	2.4	8/29/2023 - No. Confirmed with Owner on 8/10/23	Thank you for the attestation. This item may be closed.						
CR 16	Upon review of the GHG Plan, the inventory was 'conducted from March to August 2022', but the Project Start Date is 6/8/2022. Please clarify how the inventory measurements are modified to properly calculate the initial standing carbon stocks. If stocks are grown forward to EORP1, then consistency in treelist grow/degrow is expected from the inventory date to the start date.	4.2.2	08/29/2023 - The 'ACR783_ProjectDates_CO2e_082923' file contains the appropriate calculations and formula to grow/degrow inventory date CO2 calc to the project start date and EORP1 date. This file may be found in the Quantification folder.	Thank you for providing this additional information and completing these calculations. They have been confirmed, this item may be closed.						
CR 17	Is this project enrolled in any other environmental asset program for non carbon benefits?	ACR Standard	8/29/2023 - No. Confirmed with Owner on 8/10/23	Thank you for the attestation. This item may be closed.						
CR 18	Are there any known endangered or threatened species on property that need to be accounted for in the baseline model?	4.1	8/29/2023 - No. Confirmed with Owner on 8/10/23. Following online database was used for determination.	Thank you for the attestation. This item may be closed.						
CR 19	In the middle of the Huntley Trail harvest there is a NHD watercourse with SMZ buffer, please confirm how Arkansas BMPs on water quality were maintained with this harvest.	4.1	8/29/2023 - Voluntary BMPs were not maintained in this harvest. The contract logger was instructed to leave 50 BA in the SMZ, but only left saplings. This has been discussed with the contract logger and will not happen again.	Thank you for the clarification, follow up with the ATFS inspector is the mechanism for compliance. Therefore this item may be closed.						
CR 20	In 'ACR783_S&JTaylorFCP_FinalDraft_042823' on the 'IFM_HWPs' and 'Base_HWPs' tabs, there are two sets of constants being used in baseline/project HWP quantification that need clarification. Cells M29:M32 'conversion factors', and the input value of 1.10231 into the equation of cells O40:DK43.	4.2.4	8/29/2023 - Both of these tabs are now deleted and two new tabs "Baseline_HWP_Calc" and "IFM_HWP_Calc" are added to the ERT calculator file located in the Quantification folder. These two tabs have shown step-by-step HWP calculations.	Thank you for overhauling this calculation. It has been confirmed as valid, this item may be closed.						
CR 21	In the GHG Plan and the 'Baseline_NPV_Analysis' and 'IFM_NPV_Analysis' tabs of the 'ACR783_S&JTaylorFCP_FinalDraft_042823' document, the discount rate is listed at 5%. Per the IFM methodology, that discount rate is to be applied to Non-Industrial Private owners, but the Shelby Taylor Trucking company is a listed logging company, suggesting this is an industrial ownership. Please clarify.	Table 1	8/29/2023 - Discount rate has been changed to 6% and NPV calculations updated.	Apologies for reopening this item, upon review of the 'Baseline Scenario Harvest Schedule' section of 'NS_ACR783_GHG_Project_Plan_11142023_Final' the listed discount rate is 5%, which contradicts the calculations and original response to this item. Please correct this value in the GHG Plan.	11/15/2023- This has been updated in the GHG plan.	Thank you for making this change, it has been confirmed. This item may be closed.				
CR 22	In the 'Baseline VS' and 'IFM VS' tabs of 'ACR783_S&JTaylorFCP_FinalDraft_042823' the data captured in the 'Merch Carbon Removed Annually' column (S) appears to allocate any change in harvested carbon to a single row (1 year) time step, without necessarily accounting for the years between the actual values of that time step. An example of a nonissue time step is ST-14_713_2022_ST HW (row 14821) to ST-14_713_2023_ST HW (row 14822). In column S, 15.9544 is harvested in 2023, which is a difference of 15.9544 from the previous year 2022 (0). This is pulled into the 'Baseline' tab correctly. A timestep that is at issue is the same plot but later in the model, ST-14_713_2077_ST HW (row 14833) to ST-14_713_2082 (row 14834). In column S, 21.1251 is harvested in 2082, which is a difference of 21.1251 / 5 per year from 2077. At this time there are '#N/As' being pulled into the 'Baseline' tab for years 2078-2081. Please clarify.	4.2.2	8/29/2023 - In the case of baseline harvests, those were single harvest events occurring in the year prescribed. For IFM harvests beyond the initial crediting period, instead of running FVS with 1% annual harvests, it was run 5% harvested every five years in the FVS reporting interval years. The '#N/As' are because there are no model harvests during those years.	Thank you for the clarification, this item may be closed.						

CR 23	In the 'Baseline_Calc_Inputs' tab of 'ACR783_S&JTaylorFCP_FinalDraft_042823' there are assumptions applied in relation to modeled HWPs for determining the ratio between SW, HW, Pulp, and Saw classes, including 80/20, 90/10, and 100/0. Please clarify/provide the basis for these ratios, particularly when considering FVS reports will provide the breakdown of modeled harvested wood per product class per plot based on real stocking modeled over time.	4.2.4	8/29/2023 - These values were provided by NativState's lead forester as good estimates of pulpwood/saw timber percentages for modeling and applied to both the baseline and project scenarios to maintain consistency. RP1 values were calculated using actual harvested timber types. These calculations and subsequent HWPs have been provided for review in ACR783_ProjectDates_CO2e_082923 in the Quantification folder.	Thank you for the clarification, this approach appears to be reasonable. This item may be closed.						
CR 24	In the 'Baseline_NPV_Analysis' and 'IFM_NPV_Analysis' tabs of 'ACR783_S&JTaylorFCP_FinalDraft_042823' the project area quantified is not reflective of the actual operable area quantified within the project area. Please clarify.	2.4	8/29/2023 - NPV analysis was initially performed on entire ownership. Has now been changed to just operable area.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 25	In all 4 'AC 1' .out files there are a couple of FVS Error Codes: FVS14 Error Warning - Habitat code not recognized. FVS08 Warning - Too few projectible tree records. Please clarify/confirm that the intended inputs are calculating properly.	4.2.1	9/19/23- The new AC 1.out files do not have FVS error codes.	Thank you for updating these model runs, this has been confirmed. Warning codes still exist, but that is due to the nature of the inventory, not user error. Therefore this item may be closed.						
CR 26	There appear to be inconsistencies within regeneration and sprouting in the FVS baseline and project .out files. For example, all 'AC 1' .out files have Sprouting and Regen activated, but all 'ST HW' and 'HW' .out files do not. Also, there is variability between prescription type and the allocation of sprouting and regen for the 'AC 2', 'AC 3', 'ST AC 4', and 'TI AC 4' .out files where some prescriptions get sprouting and regen but others do not. A screenshot has been provided to illustrate an extreme example on tab 'CR 26' where modeled conditions do not match a likely reality. Please clarify/correct the implementation of regeneration in both project and baseline models.	4.2.1	9/15/2023 - All models have been adjusted to include sprouting and model runs updated.	Thank you for the information. Confirmation of sprouting/plant exclusion is needed for some of the prescriptions, and are included in tab 'CR 26b'. The colored cells are the ones in question. Also, in the previous .out files, there were both AC2 and AC4 Base SMZ (Constrained) .out files, but those were not provided in the new batch. Please clarify/confirm that these prescriptions are no longer applicable.	9/28/23 - Sprouting. Sprouting was turned on in TI AC4. ST AC 2 IFM was scheduled to only harvest pine. All species is now selected, so hardwood species will be harvested/resprout. No harvesting occurs in IFM constrained so there is nothing to resprout. As there were no constrained plots in AC2 or AC4, those prescriptions are no longer applicable.	Thank you, this item may be closed.				
CR 27	In the 'Baseline Scenario Harvest Schedule' section of the 'ACR783_S&JTaylorFCP_GHG_Project_Plan_FinalDraft' document the hardwood strata prescription states that, 'Hardwood strata are not to be reentered for harvest for a minimum of 60 years and MCuFt > 800 MCuFt/acre', yet there is no incorporation of the 800 MCuFt constraint in any of the prescriptions keywords as determined from the .out files. An example has been provided on tab CR 27, illustrating this discrepancy. Please correct the baseline/project prescriptions, or modify the GHG Plan to match modeled conditions.	4.2.1	9/17/23 - 800 MCuFt harvest constraints have been added. Materials and models have been updated.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 28	In the 'Baseline Scenario Harvest Schedule' section of the 'ACR783_S&JTaylorFCP_GHG_Project_Plan_FinalDraft' document the pine stand prescriptions states, 'Pine strata are thinned/harvested based on Age Class with first thinning occurring ~Year 12 removing one-third of stems, second thinning in ~Year 19 removing half of the remaining stems, and final harvest in ~Year 26.' Upon review of the 'AC 3 Base' .out file, there appears to be an initial cut, before this described pattern of .33/.5/1 is implemented, a screenshot has been included on tab 'CR 28'. Please clarify the prescription or modify the GHG Plan to reflect model conditions.	4.2.1	9/14/23 - AC 3 was the appropriate age for a second thin (50%) in year modeled as shown on Management Tab. Also note the next harvest in AC 3 is in project year 8 (2030) and is a harvest cut	Thank you for the clarification, this item may be closed.						
CR 29	On the 'Dates_CO2' tab of 'ACR783_ProjectDates_CO2e_083123' there are three plots zeroed out for the RP1 End Date and Site Visit Date columns due to RP1 Plot Harvests. Upon review of the GIS there is a fourth plot, 671, included in the 'Dan Brown' tract harvest (west of Grapevine AR) that has not been zeroed out despite being confirmed as harvested in ADR 7. Please clarify or correct the RP1 and Site Visit quantification sums for this plot.	4.2.2	9/19/23 - The new CO2 file has all harvested plots included. There are now 7 plots that were harvested in RP1	Thank you for the additional information. Please include these parcels in both the harvest layer GIS, and incorporate their harvested wood products into the RP1 HWPs, if they haven't already. Screenshots have been included confirming that these harvests did occur over the course of RP1, and that they are not currently included in the 'bright pink' harvest layer on tab CR 29.	10/3/2023 - These parcels have been included in appropriate GIS layers and incorporated into RP1.	Thank you for incorporating this data. It has been confirmed, this item may be closed.				
CR 30	In the 'CO2e_Start' tab of 'ACR783_ProjectDates_CO2e_083123' in columns J:O, the carbon stocks for the SMZ strata are hard coded as the same values as their corresponding non-SMZ strata. This is despite the fact that there are plots that fall within the SMZ strata. If they are distinct strata, why aren't they being represented by their distinct stocking as tied to their plots? Or, why aren't SMZ plots and acres compiled into their forest type representation?	5.3	9/15/23 - Each SMZ and non-SMZ strata were merged to resolve this issue. Materials and models updated to reflect these changes.	Thank you for making this correction, it has been confirmed. This item may be closed.						
CR 31	Upon review of stratification practices, it appears that every time there is a harvest those plots and their acres are going to be removed (TI HW - Rec Harv) from their respective strata (TI HW). Is this method going to be continued over the life of the project every RP there are new harvests? Also, please clarify how this method will be incorporated into Project and Baseline modeling.	4.2	9/15/23 - The TI HW and TI HW - Rec Harv strata have been combined to resolve this issue. Materials and models updated to reflect these changes.	Thank you for making this correction, it has been confirmed. This item may be closed.						

CR 32	In the 'Uncertainty' tab of 'ACR783_ERT_Calculator_083123' the values captured in the uncertainty table (cells C7:X19) do not include a breakdown of the distinct SMZ and recently harvested strata, which appears to contradict the plot level stocking methodology seen in the 'ACR783_ProjectDates_CO2e_083123' document. Please clarify uncertainty/strata/acreage/stocking approach.	4.2	9/15/23 - Each SMZ and non-SMZ strata were merged to resolve this issue. Materials and models updated to reflect these changes.	Thank you for making this correction, it has been confirmed. This item may be closed.						
CR 33	In the 'FVS_GROW_RUN', 'CO2e_Start', and the other tabs of 'ACR783_ProjectDates_CO2e_083123' there are plots associated with the ST AC1 Strata that have carbon stocking and are being zeroed out on a strata level, or are completely excluded. They include 590, 645, 646, 702, and 703. These plots were inventoried and incorporated into modeling, please clarify why they are being zeroed out.	5.2	9/18/23 - 590, 645 and 646 are AC 1 plots that have zero carbon before verification. 702 and 703 were the Huntley Trail plots that were harvested. Thus, we are treating all these plots as harvested plots in the new calc files.	Thank you for the clarification and correction, it has been confirmed. This item may be closed.						
CR 34	Upon review of the most recent map package, 'ACR783_S&JTaylor_MapPackage_FinalDraft' it appears there is some misalignment between plots and their strata, particularly in comparison to the quantification in 'ACR783_ProjectDates_CO2e_091923'. Examples are provided on the tab labeled 'CR 34'. The plots in red do not correlate across each new finalized strata. Please clarify or correct this discrepancy. It is expected that all finalized GIS match all finalized quantification, included standing stocks, and baseline/project stocks as these shapefiles and models are used for the life of the project.	4.2	9/29/23 - We have adjusted the plots to exactly align with their appropriate strata. The new GIS map layer, CO2e file and ERT calculator have appropriate changes.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 35	Upon review of the 'Baseline' and 'IFM' tabs of the 'ACR783_ERT_Calculator_091923' there is an error in the incorporation of defect in column M. There are 625 prescriptions for 625 plots, but there is only defect being incorporated on 53 of them, despite there being 46 defected plots in ST, and 32 defected plots in TI (78 total). The issue resides in the composition of the lookup featured in col. C of both the 'Baseline' and 'IFM' tabs and its corresponding entries in col. AF. A complete list of plots missing defect has been provided in the tab labeled 'CR 35', all of which are in the 'ST' strata. Please clarify or correct this issue.	4.2	9/29/23 - The issue was related to certain excel formula and plot naming convention. This issue has been resolved. The "baseline" and "IFM" tabs are currently showing 78 defective plots.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 36	In comparing the most recent map package downloaded 10/5 and the 'Project_Area' tab of 'ACR783_ProjectDates_CO2e_092923', there are approx. 40 acres the GIS has in the ST AC 4 strata, but the calcs have in the ST AC1 strata, specifically the ST AC1 'Constrained' strata. Please clarify/correct/provide the correct package.	4.2	10/31/23 - All acreages now match in the GIS, CO2e, and ERT calculator files.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 37	Upon review of the 'Baseline' and 'IFM' tabs of 'ACR783_ERT_Calculator_10032023_FinalDraft' FVS is projecting negative Merch Removed values (albeit very small, 5 sig. figs.) in column DE and other years Merch Removed. Please clarify, and limit the possibility for negative Merch Removed values.	4.1	10/31/23 - Formula was changed to set at zero if less than or equal to zero.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 38	In the 'Management' tab of 'ACR783_ERT_Calculator_10032023_FinalDraft' there are prescriptions (rows 11:18) that are used for calculating final baseline ERTs, that are reflected in the FVS outputs which the verifier has confirmed. Just below this section is a section reflecting 1% harvest of merchantable timber per year for all strata. What is the purpose of this table, as it does not appear to be reflected in modeling or carbon calculation at all?	4.1	10/31/23 - Intended to match program harvests. Has been updated to reflect 3.6% annual harvests in pine stands and 1 % annual harvest in hardwood stands as modeled.	Thank you for the clarification. This is reflected in the quantification seen in CR 40. This item may be closed.						
CR 39	Why doesn't the FVS carbon output used as the 2022 Starting Point for Baseline stocks as seen in 'Baseline_Calc_Inputs' cell C24 match the 'Total Project Start Date CO2e' value of 2,496,408 calculated in the 'CO2e_Start tab? If we have initial stocking based off of an inventory, please clarify why initial baseline carbon doesn't match it.	4.1	10/31/2023 - The start date CO2e values in both ERT file and CO2e file now match.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 40	In 'ACR783_ERT_Calculator_10032023_FinalDraft' on the 'Select_Cut ERT Calc' tab, the values captured in the 'HWP Project' row (36 of the excel) there are two separate methods being applied, both are traced back to the 'IFM_Calc_Inputs' tab on rows 54:57. The first, years 2023 to 2027, is using the same harvested values for each year, despite there only being a recorded harvest in 2027. Please clarify why years that don't have a harvest are getting a full years worth of those credits, and thus 5 times the amount of projected harvests. The second issue is related to the proceeding five year intervals, where an incrementalized harvest interval between harvest years is used. Please clarify why a harvest interval is appropriate as the harvest years are distinct, and if they are intended to be incrementalized, why should the values be based off a previous harvest, instead of total carbon at year five split evenly among the intervening years?	4.1	11/1/2023 - Thanks for pointing this out. We have changed our previous approach. The new approach uses the 20 years average IFM (project) HWP value.	Thank you for applying this new approach, it has been confirmed. In relation to the incrementalized harvests, this is the missing correlation from CR 38. Therefore, this item may be closed.						

CR 41	On the 'Baseline_NPV_Analysis' tab in 'ACR783_ERT_Calculator_10032023_FinalDraft', why aren't harvested quantities captured in columns C:F being incorporated into col. G values? For example, harvests in 2049, 2062, 2069, 2076, 2089, 2096, 2103, and 2117 are zeroed out, but there were harvests those years.	4.1	10/31/23 - Updated to reflect harvests.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 42	On the 'Management' tab of 'ACR783_ERT_Calculator_10032023_FinalDraft' the value in cell BT12 is 210? It appears to have the color coding of an 'H', and there are resulting wood products, please clarify.	4.1	10/31/23 - Whoops, not sure why that was 210, it was supposed to be an "H". Has been changed.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 43	Upon review of 'NS_ACR783_GHG_Project_Plan_FinalDraft 111123' there are some points of clarification needed. Section A6.3 states that 'thins of 3.6% per year starting in the twelfth year after planting' does not match the time frame within the 'Management' tab of 'ACR783_ERT_Calculator_11102023_FinalDraft'. Please clarify/correct. Section D.1, 'Tree Diameter at Breast Height' states that the unit of measurement is inches to the nearest 0.1", but this contradicts the 'NativState Timber Inventory SOP' section 4.2 where 1-5" trees are to the nearest whole inch. Please clarify/differentiate. Section E.1 Biomass Calculation please include description of defect incorporation. Section E.1 Baseline Scenario Harvest Schedule, in the third paragraph, hardwood strata, please include that the initial harvest is done over the first three years. Please clarify/correct this document.	4.1	11/14/2023 - All listed issues have been clarified/corrected in the GHG Plan.	Thank you for making these changes, they have been confirmed. This item may be closed.						
CR 44	In the 'Baseline_Calc_Inputs' tab of 'ACR783_ERT_Calculator_11142023_Final' there is interpolation being done on the Baseline values of cells D13:E13, and D17:E17, despite the fact that the outputs recorded in Z12:Z16 and AT12:AT16 respectively on the 'Baseline' tab are available to be used. Please clarify/correct.	4.1	11/15/2023- Thank you for pointing out the issue. The issue has been corrected.	Thank you for making this change, it has been confirmed. This item may be closed.						
CR 45	Upon review of the 'Management' tab of 'ACR783_ERT_Calculator_11142023' there are no harvests occurring in the year 2087, but all the FVS outputs for that years have harvested values in the SMZ (purple). Please clarify/correct this table. As well, in the Merch Harvested section of the 'IFM_Calc_Inputs' tab there are harvests every 5 years per the model, and the prescriptions applied are determined by the color (T1, T2, H) which the verifier was able to replicate except in one instance. Please clarify the interpolation used in row 54:57 as in the years 2038 to 2041 do not seem to have the appropriate wood products distributions.	4.1	11/15/2023 - Thank you for the notes. The "Management" tab is now corrected and the harvests in year 2087 is now correctly reflected/represented. The interpolation in rows 54:57 in the years 2038 and 2041 are now working correctly in the Merch Harvested section of the "IFM_Calc_Inputs".	Thank you for making these changes, they have been confirmed. This item may be closed.						